MODEL RAILWAY NEWS

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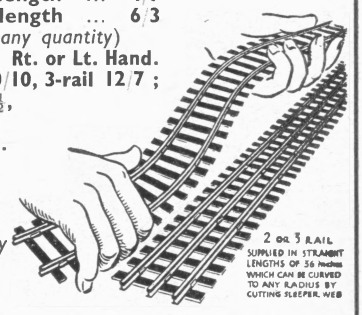

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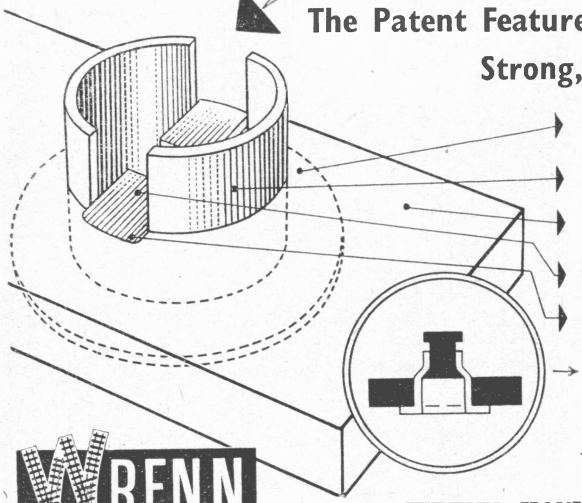

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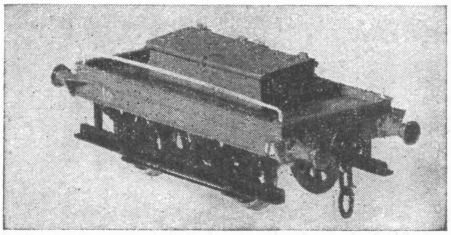

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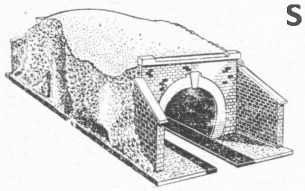

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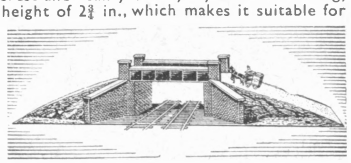

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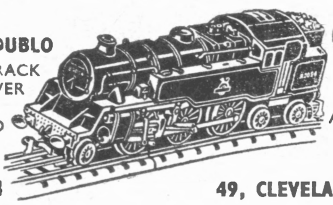

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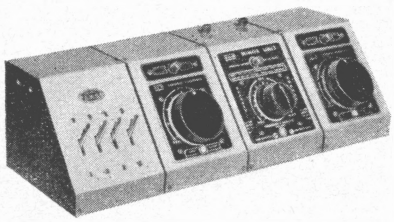

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MAY 1956

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EDITORIAL

THE Model Railway Exhibition this year was one that stirred one's enthusiasm for our hobby, and the progress it is making, and cemented one's faith in the future; for, wherever we looked, we found both the trade and the private individual had produced something fresh. Moreover, the technical aspects, especially with regard to electrical matters, are being steadily and successfully tackled in a manner which, hitherto, seemed unbelievable.

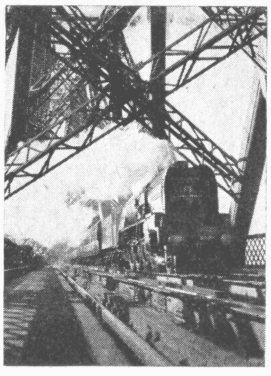
One of the most notable advances is the steady progress being made in the adoption of the 2-rail system of electrification; and here the trade is rising to the occasion and meeting the demand. The basic idea of 2-rail is perfectly simple and certainly no more complicated than any other system; but its greatest advantage on a layout where the traffic is operated by models of steam and diesel locomotives is that the effect is exactly similar to that on full-size railways where similar conditions exist. That is to say the method whereby the locomotives are powered is invisible, in that no third rail or other visible means of supplying power is required.

In the foreseeable future, only those sections of full-size railway that are to be electrified will have the necessary electrical conductors; therefore, only those model railways on which models of electric trains are to run should be similarly equipped. Since future full-size railway electrification, other than in the Southern Region, so far as British Railways are concerned, will be on the overhead catenary system, model railways will follow suit. That this presents no difficulties is plain from the number of model railways, as well as the rapidly growing number of model tramways, that are already operating on this system.

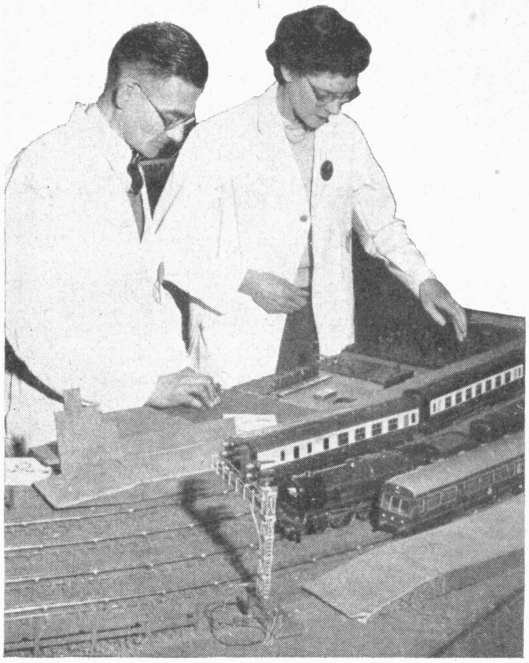
Alongside all this, the modelling of old-time steam locomotives and trains is as popular as ever and continues to increase. Thus the expression of all tastes, and the catering for them, in our hobby, seems " set fair " for an indefinite period.

ON THE COVER

This month's cover picture, by Fox Photos, is a flashback to the days when Sir Nigel Gresley's fine 2-8-2 locomotives of the " Cock o' the North " class were at the height of their fame. The six engines of this class worked chiefly on the old Waverley Route between Newcastle, Edinburgh and Dundee for some nine years, and were then converted into 4-6-2 engines of class A2/2, because they had eventually proved to be too rigid in their original condition. The photo shows *Cock o' the North* itself on a train crossing the Forth Bridge.



The Model Railway Club Exhibition



Mr. R. W. Inkster and Miss Jean Hamilton at the main control panel of the Manchester Model Railway Society's "O" gauge layout. "The Manchester Regiment" the appropriately named locomotive also in the picture, gave an excellent account of itself throughout the exhibition, at one time hauling twenty-two coaches. Not bad for twenty years old!

THE visitor was greeted by a handsome 7¼ in. gauge model of an ex-L.N.E.R. Class "L1" tank engine. This 6 cwt. model bears a plaque to the effect that the locomotive set up a non-stop distance record of 100.3 miles on September 19th, 1954. When this event took place on the track of the West Riding Small Locomotives Society at Blackgates we published a few comments on the question of "records" of this nature and are still of the opinion that if similar attempts are to be made some definite standards must be laid down in order to ensure accurate assessment of the figures that arise out of the tests.

Behind this stationary model ran the live steam passenger trains on mixed gauge track. We need not dwell upon the popularity of this section, but to affirm the good use to which it was put by the young and the not so young. We were glad to see that personality, Mr. V. C. Storey, who, despite personal affliction, graced the proceedings with his presence. His two fine Tilbury tanks were well worked by his colleagues.

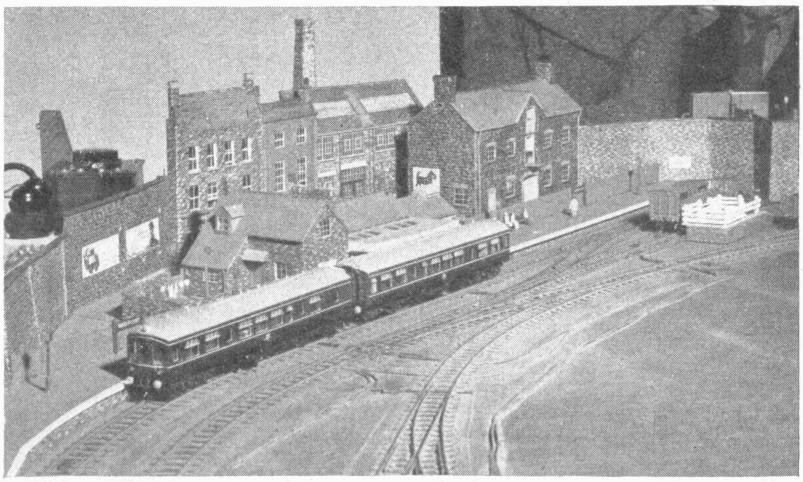
* * *

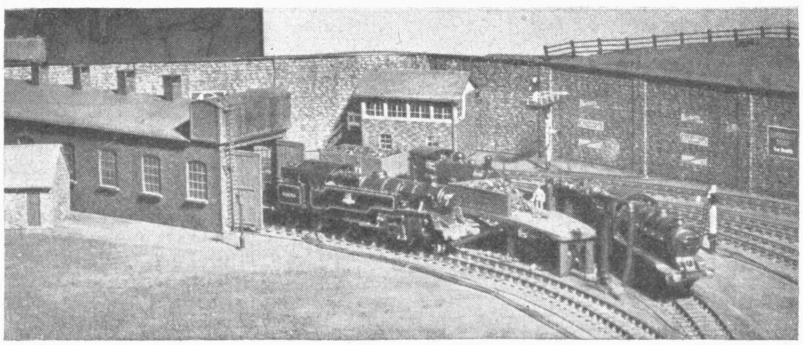
The largest gauge represented was a Great Eastern Railway 0-4-0 "Y4" class tank in 9½ in. gauge.

This is a soundly-constructed job which can probably perform prodigies of haulage. It is very closely to scale, but its looks are spoiled by the dome, which is too small in diameter, and the chimney, which seems to be a remarkable compound of former Lancashire and Yorkshire, Hull and Barnsley and Great Northern Railway practice. The result is a chimney that is nothing like anything ever seen on the Great Eastern Railway.

* * *

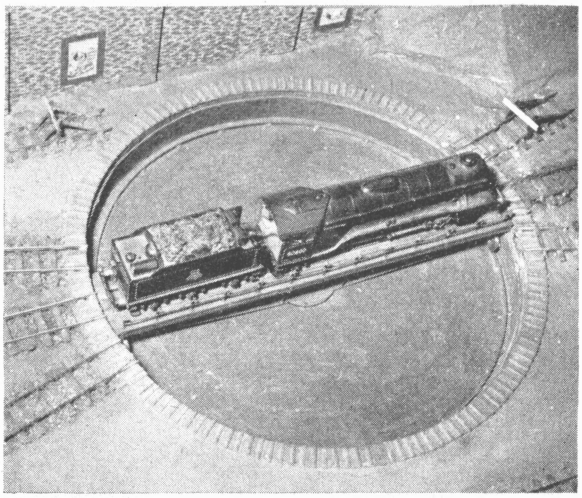
Stewards on the electrical stand, which was fully fitted with automatic models demonstrating the degree to which electricity can be used, were kept busy answering the queries of visitors. A rough estimate of the number answered was given at 1,000. We confess to giving those working the stand a shock of the non-electric variety when we subjected them to the "flash" of our photographic equipment. "Unexpected flashes on this stand are definitely the cause for concern," was the comment of one steward.

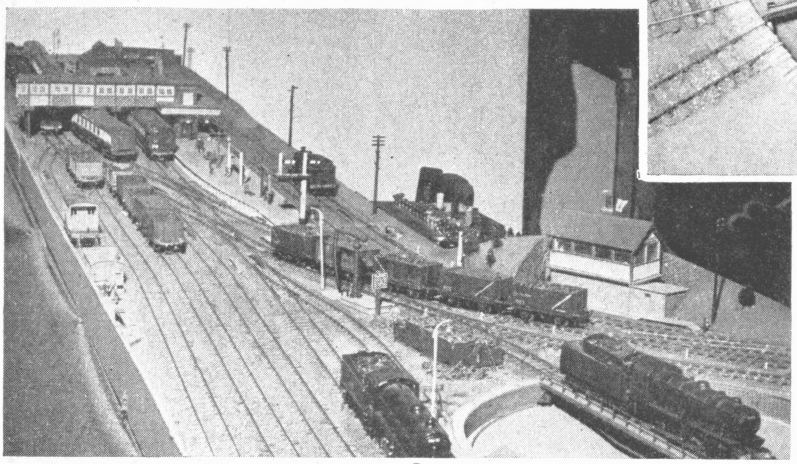




The Ashdon and Midport Branch. Two-rail; 16.5 mm. gauge. Top: The new B.R. two-car Diesel lightweight train arrives at Midport. Below: Busy scene at Midport Depot. Exhibited by Mr. K. W. Ashberry

The Gauge "1" Model Railway Association's layout was redesigned to permit visitors a good view of train marshalling operations in the yard. During these operations a variety of rolling stock came through the tunnel portal that marked the commencement of a hidden section, and, although unseen by visitors, a considerable amount of work went on here to assemble trains for the run to the typical branch line terminus at the other extremity of the layout. It is a long time since we have seen gauge "1" so effectively represented with its track fully chip-ballasted and operations carried out to "the book." No wonder the stewards were so often seen talking to apparent would-be "owners."

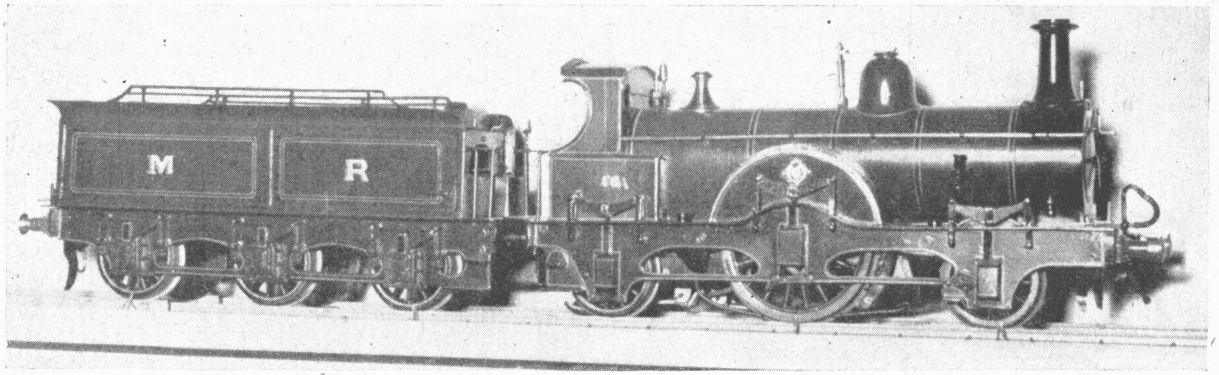




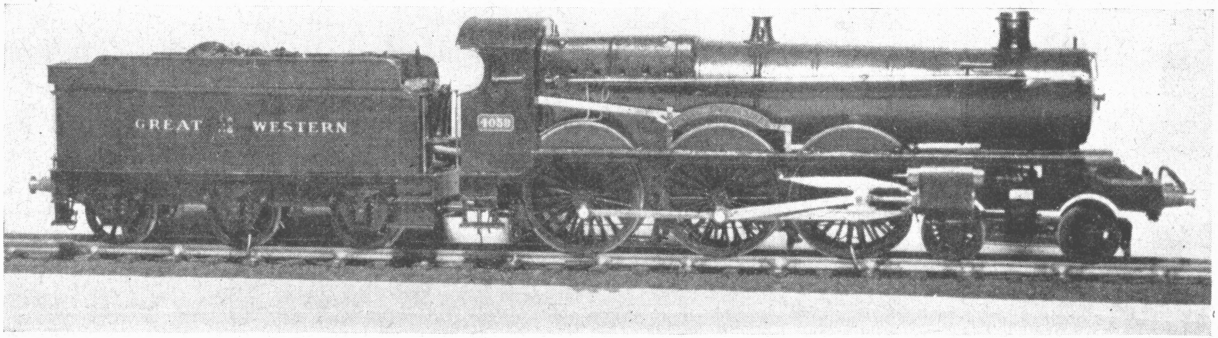
The Borchester Town and Felpersham Branches sported two turn-tables, on the right 2-6-2 No. 60800 on the Felpersham table and, below, a general view of Borchester Town Station. A "OO" gauge, two-rail combination of two layouts, linked together for exhibition purposes

* * *

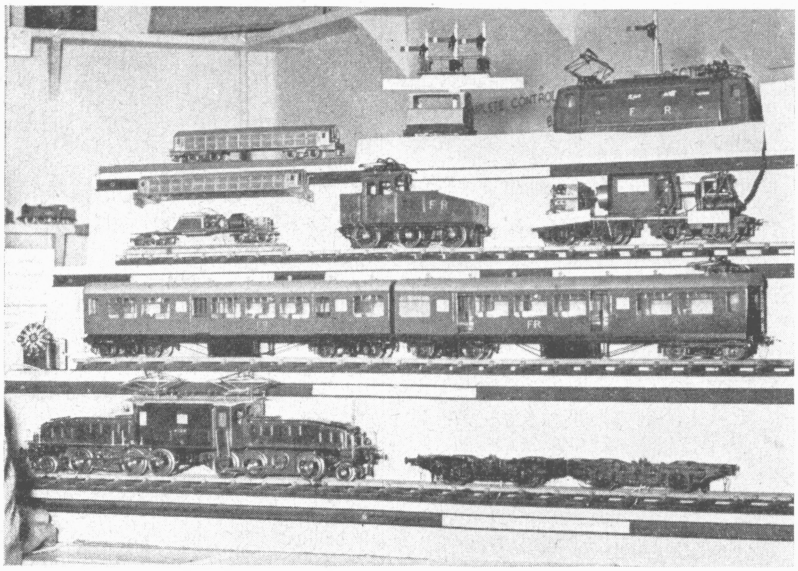
Mr. George Reffin's Tidewater and Southern Railroad, scratch built to 16.5 gauge, is an excellent example of the fact that by really fastidious attention



A Kirtley "Single," No. 16A shown by Mr. H. G. F. Bantock. 7 mm. scale



A beautifully detailed 4 mm. scale model of a G.W.R. "Star" class locomotive No. 4058. Exhibited by Mr. W. E. Ward-Platt

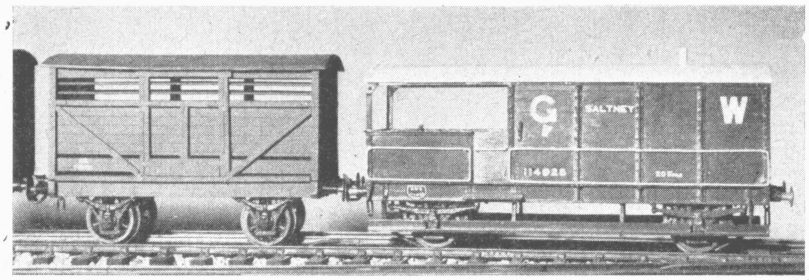


Some of the models exhibited on the Electrical Stand. The motors of the free-lance Fort William electric locomotive and the Underground battery car periodically turned over. The signal bracket and the arm worked automatically. One of the stewards on this stand, Mr. H. D. Pinnington, exhibited a new method of reversing, reducing the number of controls. We shall be publishing more details of this system of voltage inversion in a subsequent issue.

to scenic planning and detail the basic oval track plan can easily be camouflaged. In fact, such is the wealth of detail on this layout that one seems not to notice the size of the base board (8 ft. × 4 ft.) at all.

* * *

The Borchester Town and Felpersham Branches, a combination of two members' layouts, made another appearance. The connecting section has been redesigned and both branches proved interesting, whether viewed as individual layouts or as a combined effort. Like all the other working exhibits the Borchester Town and Felpersham Branches drew large and very mixed crowds of spectators and at times the serried ranks prohibited a newcomer from gaining a glimpse of the layout. During one peak period on the Saturday the crush barrier gave way, but some quick thinking on the part of the stewards and a certain visitor saved



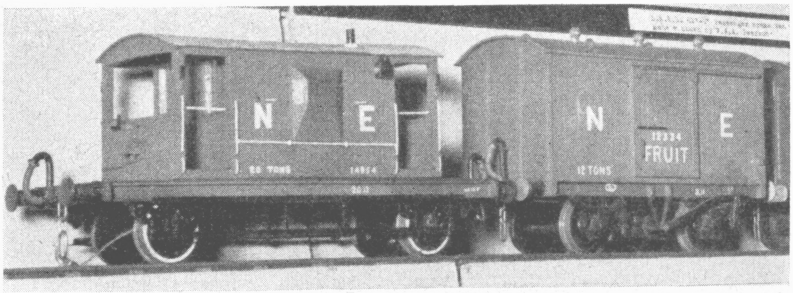
Two fine models that were seen on the gauge "1" layout

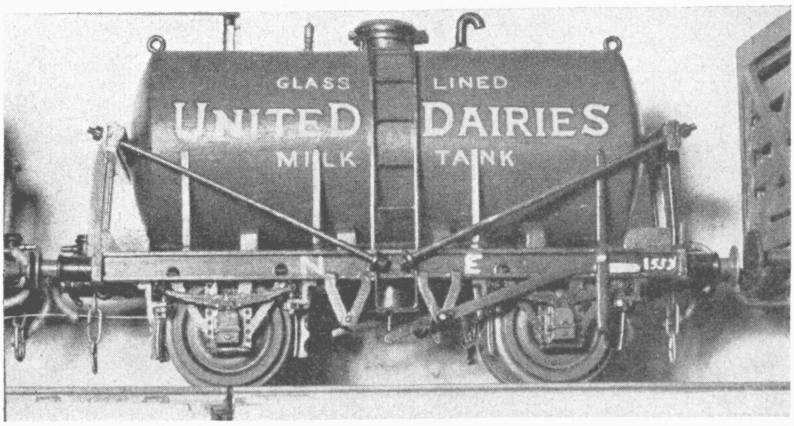
the gathering from damaging either themselves or the layout.

With the two other working exhibits in the annex to the lower hall, the Tidewater and Southern Railroad and the Ilford and West Essex Model Railway Club's demonstration layout, the B. & F.B. made it a most entertaining corner of the exhibition. Narrow gauge exhibits including a very nice piece of dual-gauge track by a renowned (?) advocate of N.G., and some examples of the work by junior members provided the static displays of this annex.

* * *

Another layout that made a reappearance this year was the Ashdon & Midport Branch. A 16.5 gauge portable layout designed for easy storage when not in use, the A. & M. Branch must have decided many visitors to the exhibition to get moving "on one of their own," for whilst it is very simple in design no efforts have been spared to produce a detailed system. Described in full in the April, 1955, issue of the MODEL RAILWAY NEWS, a number of alterations and additions have been made since then. An addition to the motive power was a beautifully made two-car B.R. diesel complete with



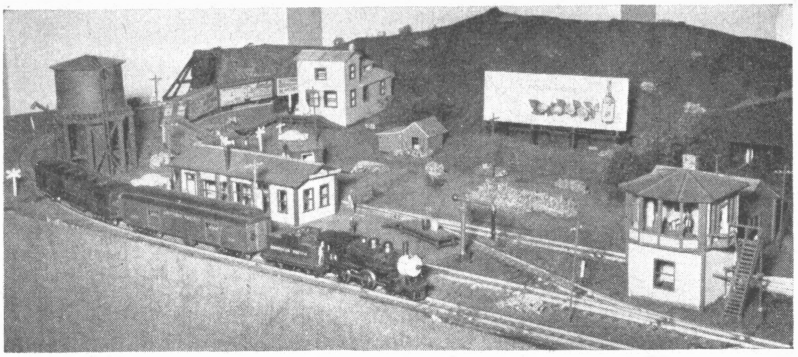


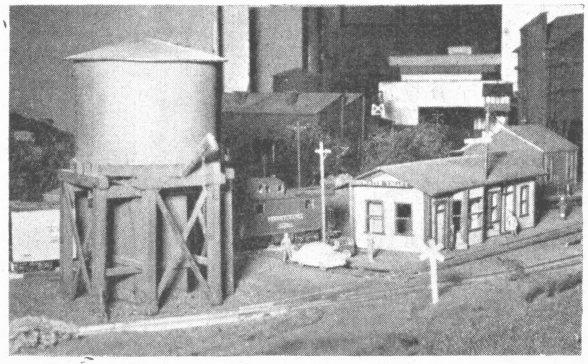
Some of the stock shown by Mr. G. E. Bigmore. On the left a "Queen Mary" brake van and a 12 ton fruit van on the right. And below a United Dairies milk tank. All in 7 mm. scale

internal fittings in both cab and passenger section, water pipe work on the roofs and as much of the underfloor work as can be seen. A farmstead of "Bilteezi Cards," a builders' merchant's office, a warehouse and a working crane are static additions. A two-aspect colour light with route indicator has replaced the three arm down home bracket signal because it was found that mechanical operation over a long distance left something to be desired.

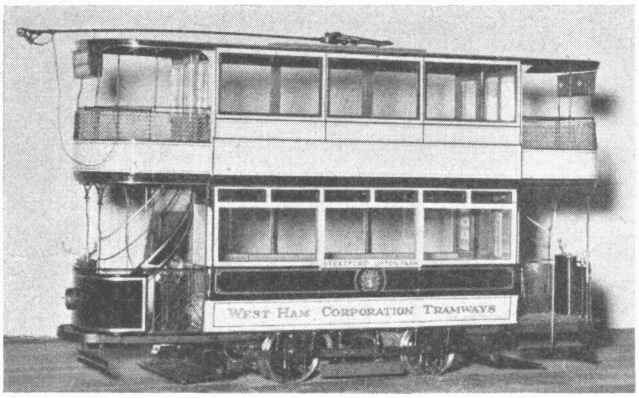
* * *

The Manchester Model Railway Society paid a pretty compliment to British Railways over the latter's handling of the 19 cwt. of gear brought down to London. The door to door journey was made without a hitch in 10½ hours, and not a scale sleeper was damaged. The gear constituted the M.M.R.S. "O" gauge running track which, basically, is a continuous double run with goods yard, locomotive sidings and a four-road station. The locomotive appropriately named "The Manchester Regiment," caused a few jaws to drop when it pulled out of Baguley Station with a train of 22 coaches. They could not get any more behind; they ran out of coaches!

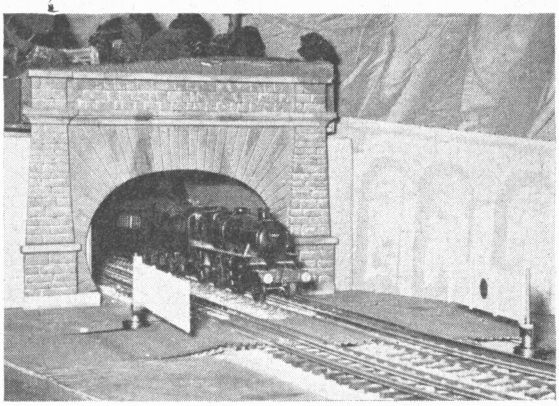




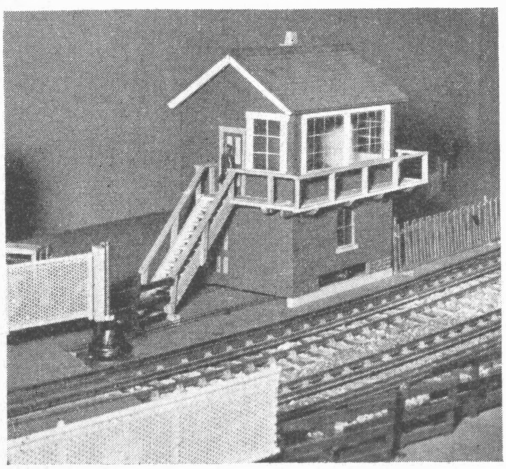
Two views of The Tidewater and Southern Railroad, Mr. George Reffins 16.5 gauge, two rail layout representing a branch line of the Southern Pacific. Top view of a short passenger train at Tidewater Valley Station whilst the bottom view shows the tail end of a train of P.O. reefers crossing the roadway



Mr. F. J. Roach exhibited this magnificent ¾ in. scale model on the layout of The Tramway and Light Railway Society

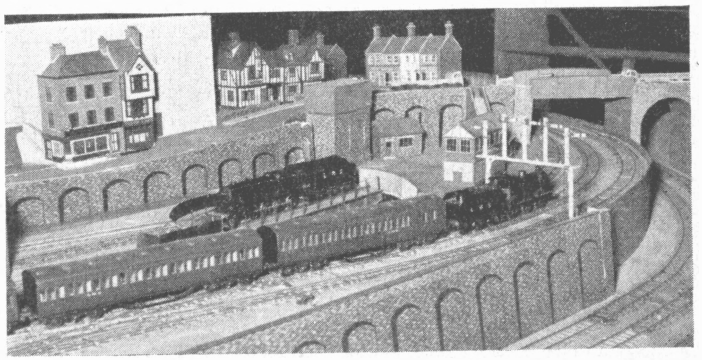


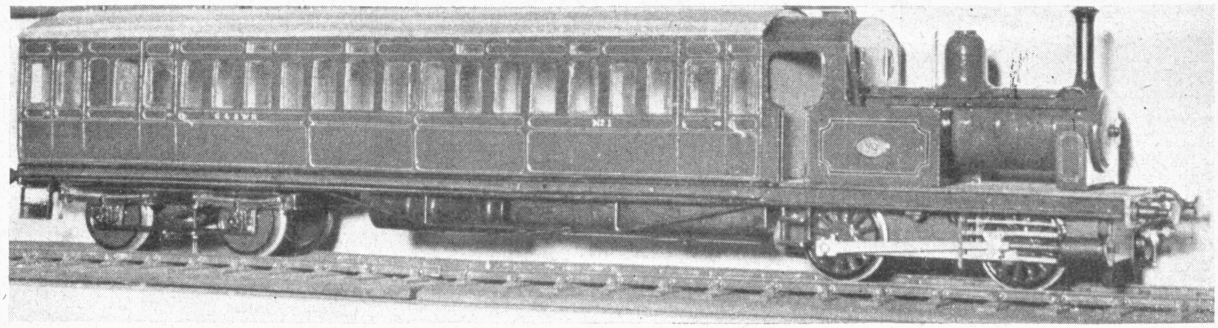
The tunnel mouth which leads to the blind section of the gauge "1" layout



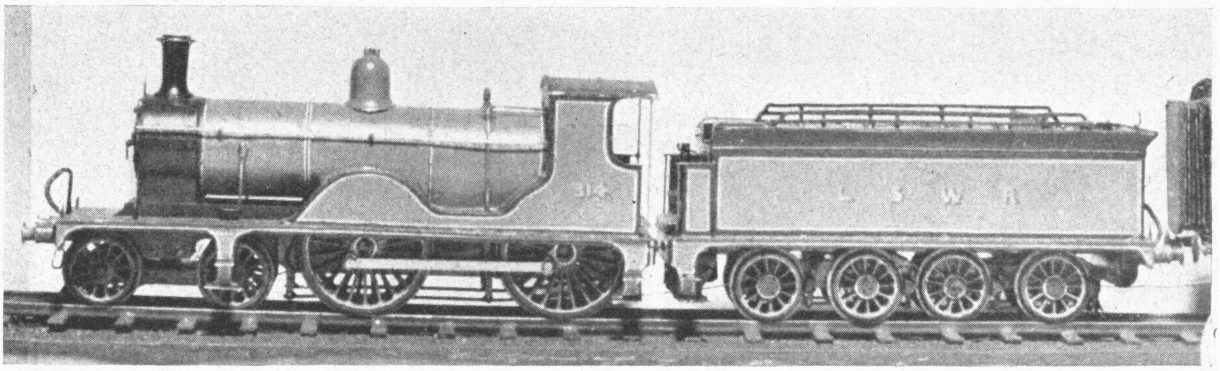
Left: Another piece of gauge "1." Signal box and crossing gates

Below: L.M.S. 0-6-0 No. 4177 leaves what will be called Rumford Station (the official naming ceremony has yet to take place) whilst 2-8-0 No. 8045 is turned round. The Ilford and West Essex Model Railway Club's layout is becoming very well known in the South of England

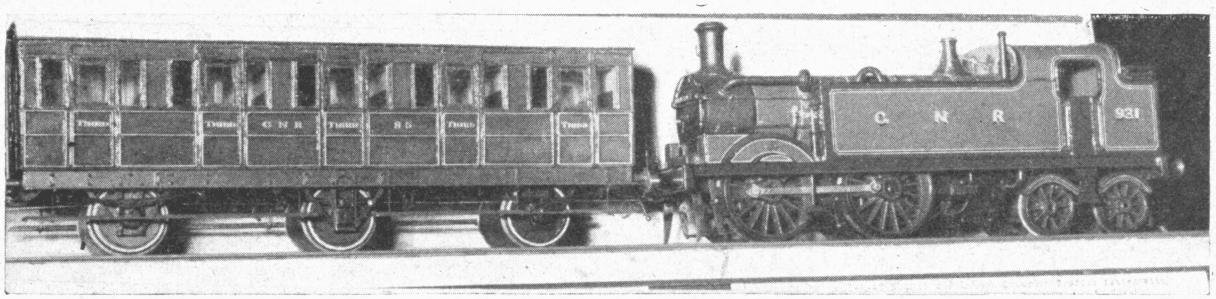




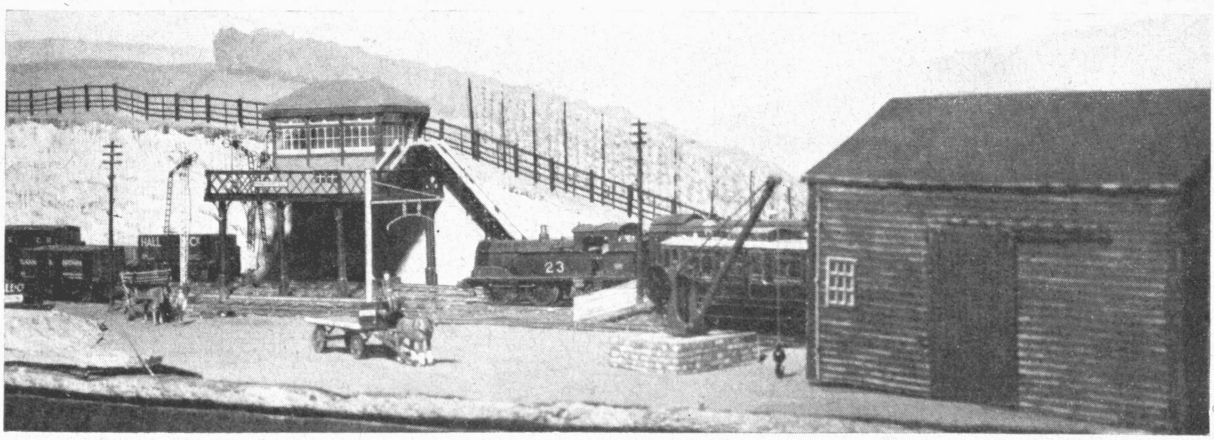
Glasgow & South Western Railway steam motor carriage built in 1903 to the design of James Manson. A 7 mm. scale model by a member of the Historical Model Railway Society



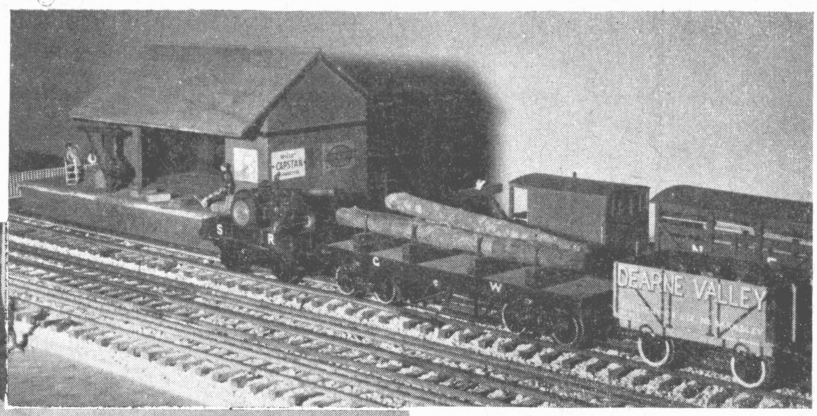
A Drummond T9, No. 314 in L. & S.W.R. colours and in 4 mm. scale H.M.R.S.



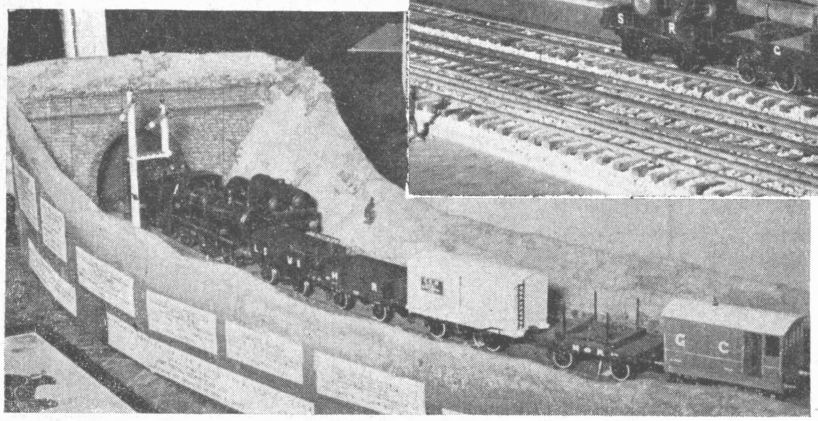
G.N.R. Stirling 0-4-4 tank No. 931 for London suburban traffic fitted with condensing gear for Metropolitan lines and a six-wheel suburban third class coach, both in 7 mm. scale and shown by Mr. A. Cowan



Foxbourne Station, S.E. & C.R. A 4 mm. scale, 16.5 mm. gauge stud contact layout. A typical country station on an ex-L.C.D.R. secondary line, circa 1919. Mr. D. Halliday



Right: By redesigning the gauge "1" layout, visitors were permitted a much better view of shunting operations. The depot and some of the varied freight stock can be seen here. The double track in foreground constituted the main run of the layout

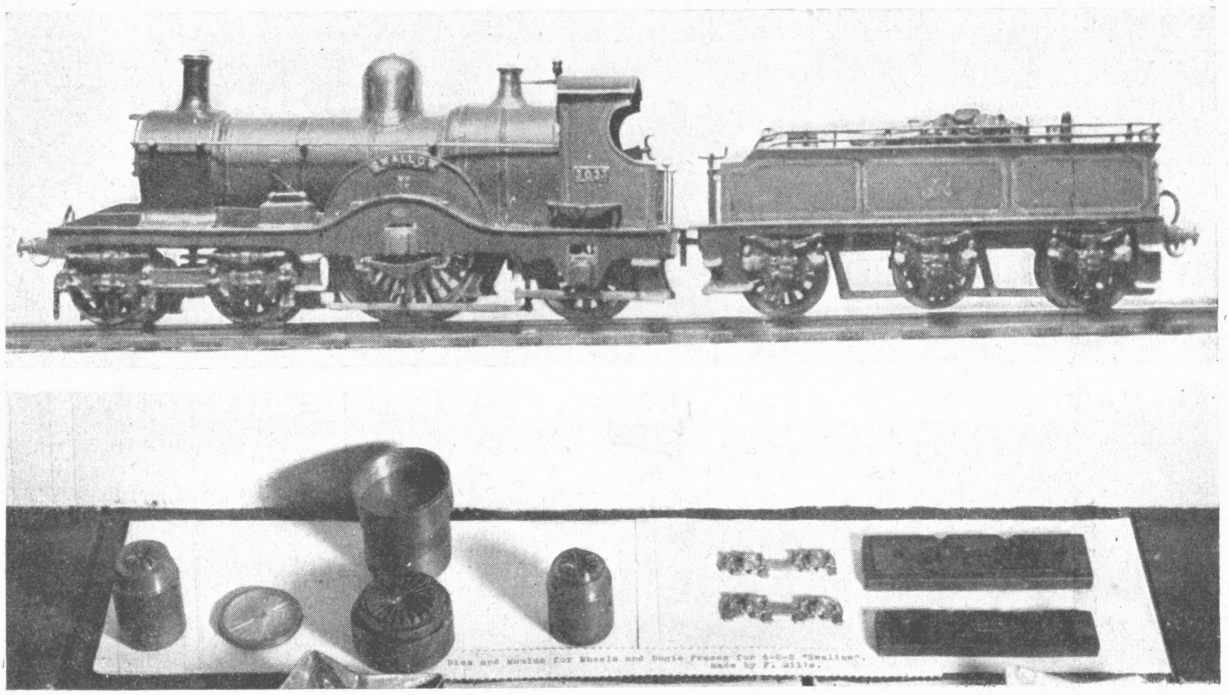


Left: A portable section of the Buckingham Branch Line (G.C.R. circa 1905) exhibited by Mr. P. B. Denny. From left to right: G.C.R. 0-6-0 goods with mechanism in tender; M. & G.N.J.R. gas tank wagon; L. & S.W.R. 5 plank open wagon; H.R. 5 plank 8 tons open wagon; G.E.R. refrigerator van; H.R. swivel bolster wagon and a G.C.R. 15 tons brake van. But who was the signalman? 18 mm. gauge, two-rail

Nevertheless, for a 20-year-old locomotive, it was a worthy feat.

* * *

A 4-mm. scale G.W.R. Dean single-wheeler No. 3023, *Swallow*, was not only interesting on account of its being quite a delightful reproduction of the famous prototype, but was especially intriguing because of the display of moulds and castings of wheels and bogie side frames. This is really getting down to things, and the results are worth it. It is a pity that the maker of the model evidently missed the point that the full-size *Swallow* was originally one that was built as a 2-2-2 and, in consequence, had much deeper frames each side of the trailing axlebox, a peculiarity that was retained after conversion to the 4-2-2 type.



G.W.R. 4-2-2 "Swallow" made and shown together with dies and moulds by F. Mills. 4 mm. scale

RAILWAY TOPICS

By J. N. Maskelyne, A.I.Loco.E.

L.T.S.R. THUNDERSLEY

The old locomotive " Thundersley " and an old L.T.S.R. coach, both painted in their original colours

IN connection with the L.T.S.R. centenary celebrations held at Southend-on-Sea in March, one of the principal exhibits was the 4-4-2 tank engine No. 80, *Thundersley*, painted in her original livery. She looked very nice, but not quite like she did when I first knew her; but I suppose that her recent " restoration " has been made as complete as it could be 47 years after she was built. The present Stanier chimney is nothing like the original one, and neither the dome nor the safety-valve casing is the same shape as it was. If it comes to that, the boiler and smoke-box are decidedly " Derby," rather than due to the designs of Mr. Thomas Whitelegge !

Bright Colours

However, I feel that it is far better to have the engine as she is than not at all, especially as the repainting in that lovely, brilliant green, with its deep purple-brown bordering, black, white and red lining, has been most excellently done, and the engine looks a treat in these drab days of standardisation. Moreover, she is in quite good fettle, as I know from having immensely enjoyed the journey behind her on March 3rd, in the special train she hauled from Southend to London, over the original route *via* Tilbury.

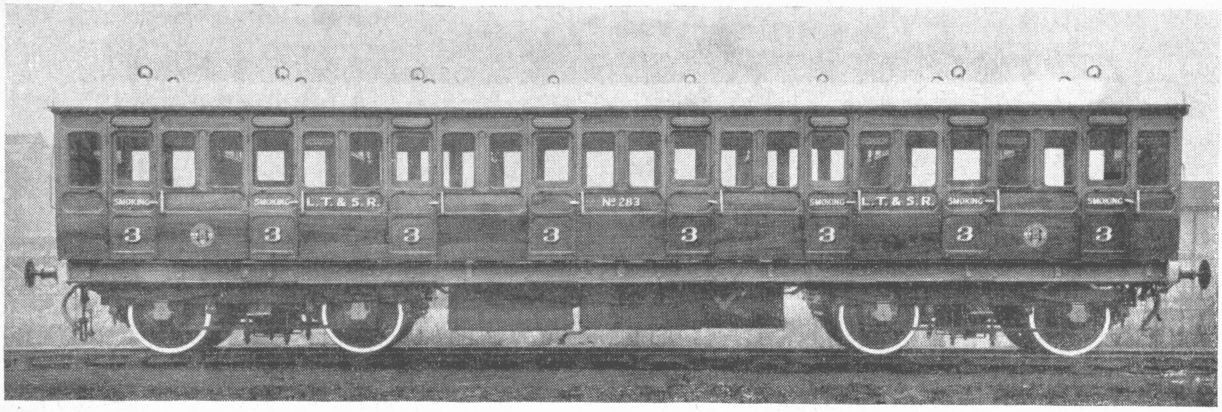
I was greatly amused by the B.B.C announcer who, in the news bulletin the same evening, gravely and firmly told us that this special train had been " drawn by the same engine that worked the first train from Southend in 1856 " ! *Thundersley* was not built until 1909 ! In that year, I made my first acquaintance with her, for she was an exhibit at the White City Exhibition at Shepherds Bush, London, and attracted much attention. Then brand new, she was painted a lovely dove-grey, lined out in black and white and named *Southend-on-Sea*. The name was altered before the engine went into service, because there was an earlier *Southend-on-Sea* still running. A year or two later, No. 80 was repainted in the standard L.T.S.R. livery and retained it until after the Midland Railway acquired the L.T.S. in 1912 and painted all the passenger engines in the standard Midland red livery, and the goods engines black !

Thundersley was one of four engines built in 1909, the last ever built for the old London, Tilbury and Southend Railway Company, and the largest ever owned by that company. In 1923, the L.M.S.R. built another couple of dozen very similar engines, but fitted with superheaters and extended smokeboxes. At about the same time, the four L.T.S.R. engines were reboilered at Derby, to bring them into line with the new engines; and it is this that accounts for *Thundersley's* present appearance.

It is fortunate that *Thundersley* was still in existence to take part in the centenary celebrations; for she was the only one of her " quartette " to survive, as London Midland Region No. 41966. The other three, Nos. 41965-7-8, had been scrapped by 1954. For their time they were powerful engines, with their 19 in. by 26 in. cylinders, 170 lb. boiler pressure and 6 ft. 6 in. driving wheels, and they have done much good and even strenuous work on their home line.

The Old Coach

The special train which *Thundersley* worked was made up of stock which is usually in service on the L.T.S.R. today; but there was one exception in the form of a bogie all-third built about 1910. This coach has been repainted in

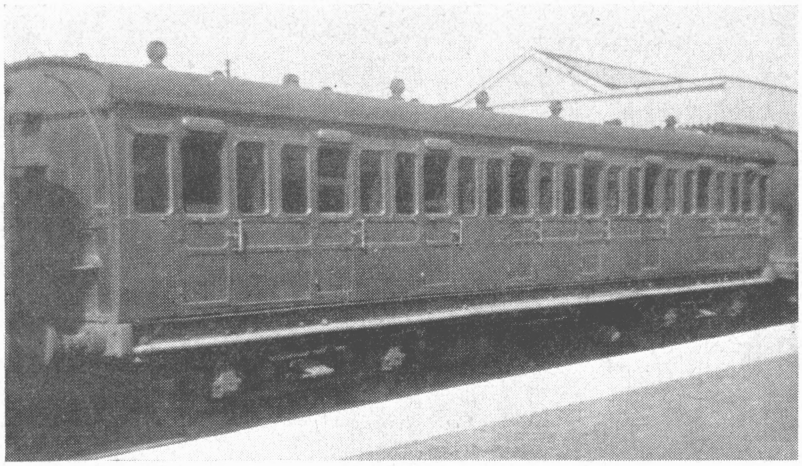


Ex-L.T.S.R. eight-compartment, all-3rd bogie coach No. 283, built 1910

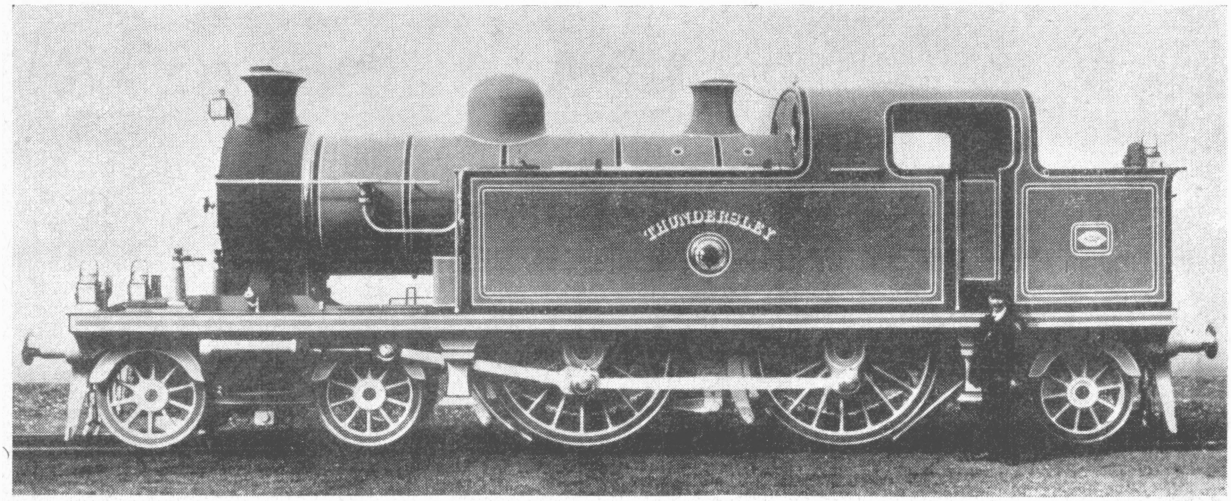
its original style and, like the engine, is to be preserved. It looks very well in its light, grained-teak finish, highly varnished, its white roof and its black underframe. I understand that it rides very nicely; but I was unable to sample this for myself, because it was occupied by passengers who were members of local amateur dramatic societies and who were dressed in costumes of the 1850s, to add a touch of authenticity to the centenary celebrations. I append a photograph of this particular coach, No. 283, in its restored state.

I am also able to include, by contrast, a photograph of a very similar coach, a few examples of which are still to be seen in service on the Tilbury line. I am indebted to Mr. G. M. Kitchenside for this photograph.

These centenary celebrations passed off happily and successfully, and they reminded me of the times, now long ago, when the L.T.S.R. was a small but very important and go-ahead railway.



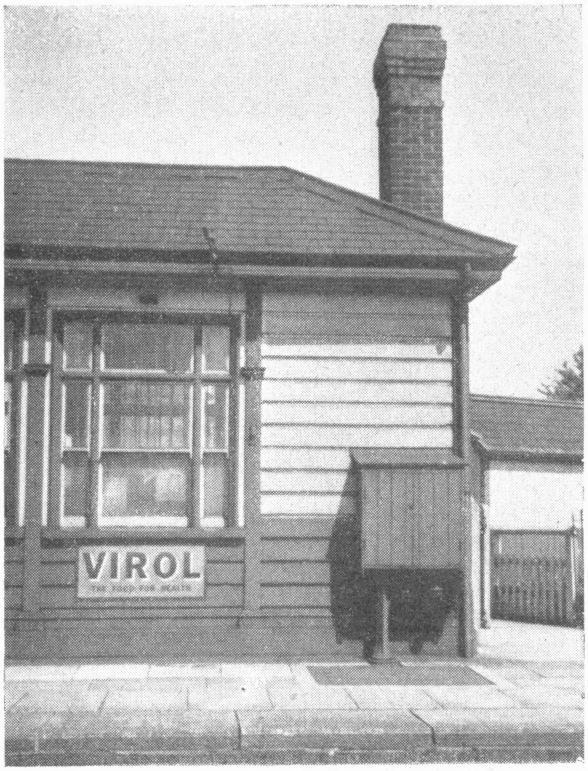
A similar coach to that shown at the top of the page, making an interesting comparison



Ex-L.T.S.R. 4-4-2T. locomotive "Thundersley" as built

ARMITAGE STATION BUILDINGS

Michael Leigh gives details of the station buildings. He described the track lay-out in the June 1954 issue



View showing the rail side of the booking office end of the building

THIS small country station is, in my opinion, ideal for either a large type station on a sleepy branch, or as a small wayside station on a main line or cross-country line. It is typically L.N.W.R. in design and really beautifully proportioned, the only things detracting from its lines being the two ugly vent stacks over the toilets.

The drawings and photographs, together with the latter of June 1954, are pretty well self-explanatory, though a few extra words would not be amiss. The whole construction, except for chimney and vent stacks, is of wood and on the drawings I have shown a suggested method of treatment for modelling. I would suggest a flat base to start on, cutting out doors and windows, and then by building up sides, windows and doors on to this, the finished result would then be a strong and realistic replica of the original.

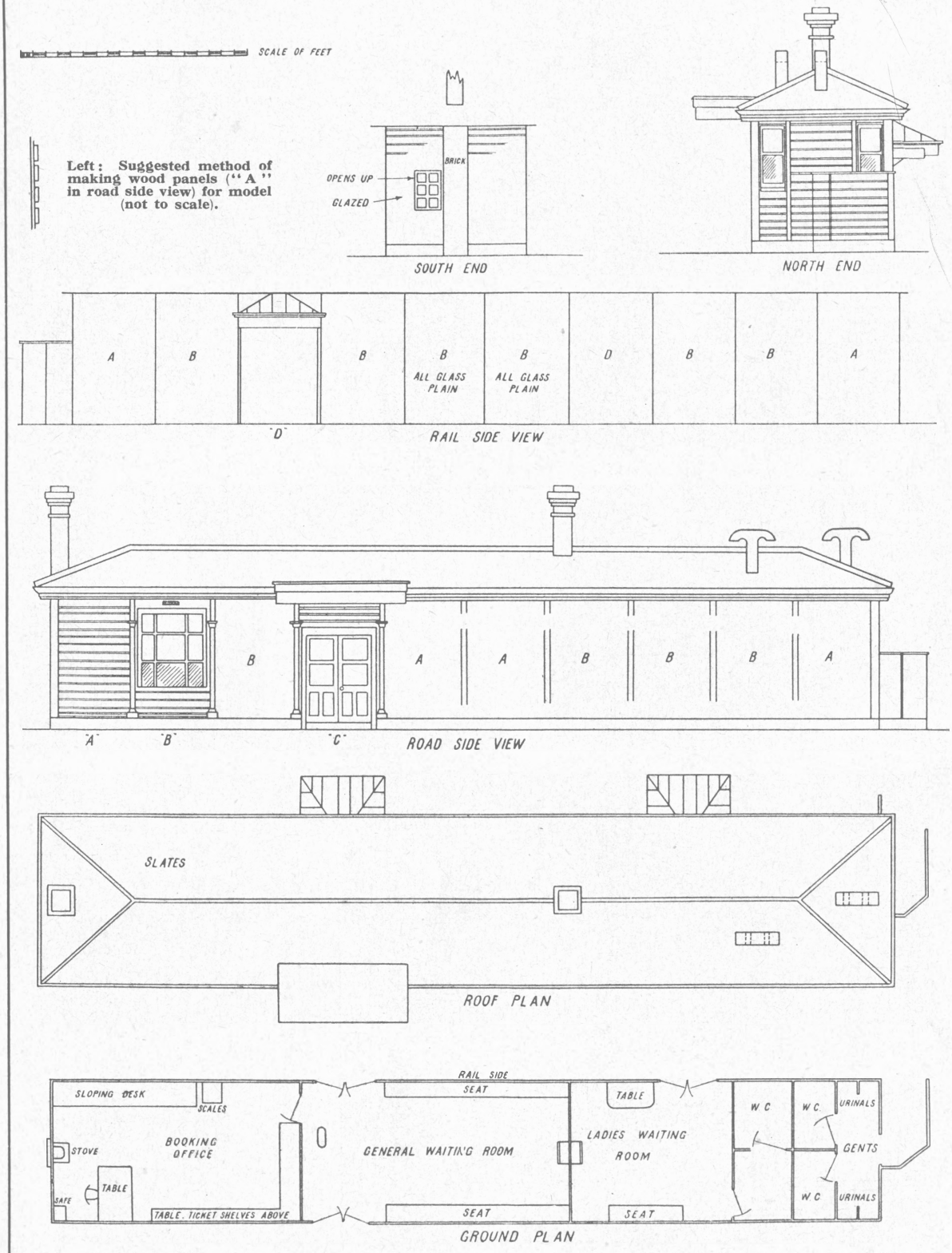
Of great help to modellers is the fact that the building floor is one step up from platform and footpath level, so that no "deception" is necessary to hide this feature. The floor is plain boarding running lengthways in all rooms, except in the gent's.—this latter is concrete and all steps are concrete.

On the drawing each "bay" has been lettered according to the design of one I have drawn in detail—e.g. "A" is plain boarding; "B" is windows; "C" road door; and "D" platform doors (actual doors of "D" are identical with "C").

Each bay is divided by vertical timbers, the outer face being flush with the bottom board of the main construction. So it will be seen this bottom board is rather like a skirting and slightly projects on all four sides.

The roof is grey slate with usual guttering and the toilet vent stacks are metal. Downspouts are at each corner of the building and one between the third and fourth bay from right-hand side, facing buildings, on road and platform side. Fire buckets, 3, on the usual board, hang on the platform side beneath the "Gentlemen" notice board.

Posters, weighbridge and other accessories have not been shown on plans, as these are optional. For those L.M.S. enthusiasts who want a typical L.N.W.R. station, Armitage is very representative for almost any area.


SCALE OF FEET
Left: Suggested method of making wood panels ("A" in road side view) for model (not to scale).
OPENS UP
GLAZED
BRICK
SOUTH END
NORTH END
A
B
B
B
ALL GLASS PLAIN
B
ALL GLASS PLAIN
D
B
B
A
"D"
RAIL SIDE VIEW
B
A
A
B
B
B
A
"A"
"B"
"C"
ROAD SIDE VIEW
SLATES
ROOF PLAN
RAIL SIDE
SLOPING DESK
SCALES
SEAT
TABLE
W.C.
W.C.
URINALS
STOVE
BOOKING OFFICE
GENERAL WAITING ROOM
LADIES WAITING ROOM
GENTS
SAFE
TABLE
TABLE. TICKET SHELVES ABOVE
SEAT
SEAT
W.C.
URINALS
GROUND PLAN

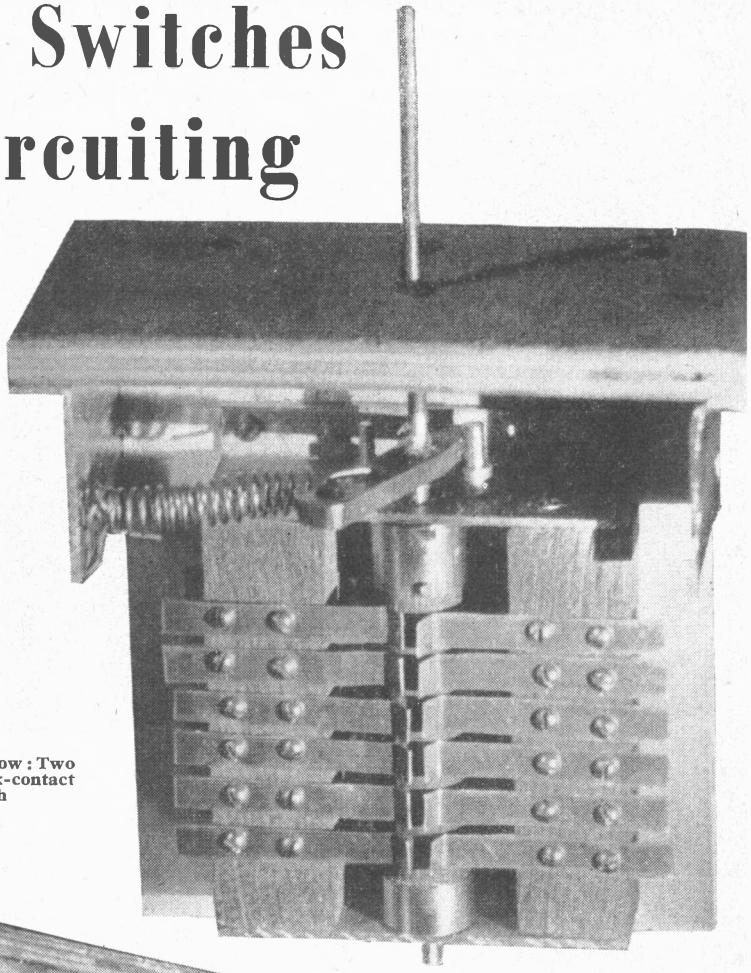
Multi-contact Switches for Track Circuiting

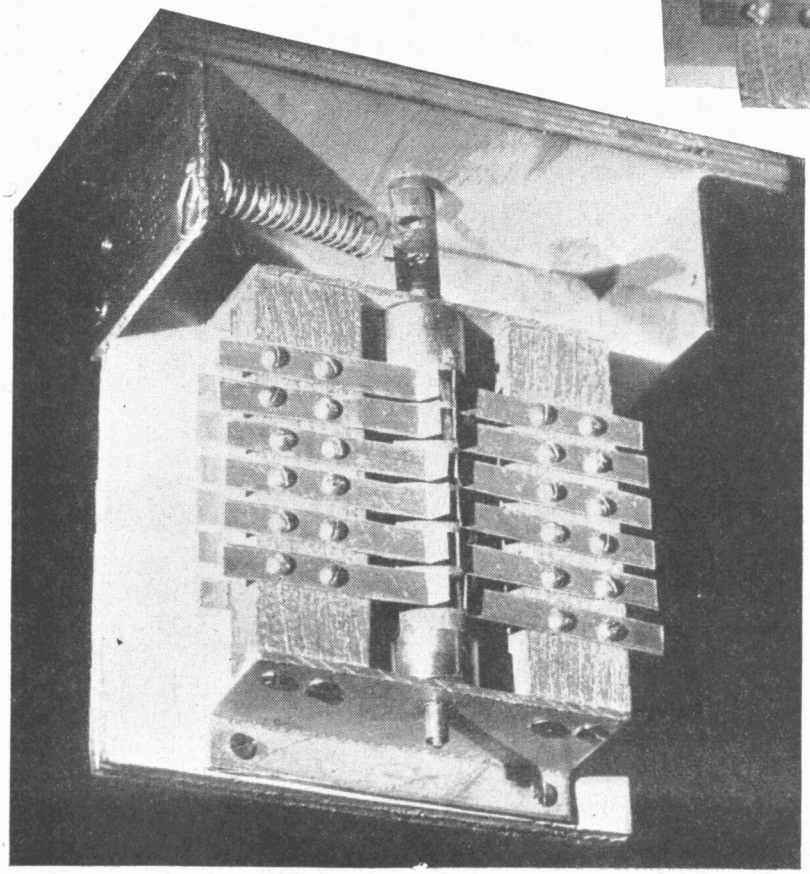
By F. Reynold and

L. H. Weedon

THE track circuiting of a double junction for two-rail operation to give full protection against incorrectly set points and against a collision between two trains at the cross-over calls for a number of two-way and single "on-off" switches suitably arranged in two gangs and operated by movement of the point levers.

The switches shown in the drawings and photographs have been designed and constructed for track circuiting double junctions, although they can be used for other purposes such as for automatic signalling. They are for under base-board mounting and are operated by Bowden cable with spring return or by the usual type of point motor if preferred. The switches were designed with a view to being simple to construct and at the same time to be reliable in operation over long periods. Any reasonable number of contacts can be provided for.





Right and below : Two views of a six-contact switch

Constructional Details

As will be seen from the photographs and sketches, the switch consists simply of two end brackets connected by two pieces of oblong sections of wood which carry the spring contacts, with a suitable rotor connecting the bottom and single row of contacts to either of the top rows of contacts as required.

The wood used is fairly important, the necessary characteristic being that it will not split when a large number of small screws are inserted along the same grain; for this reason a soft wood should be selected. Teak was used on the switches illustrated but was not entirely satisfactory, and one or two elements had to be replaced.

The Rotor

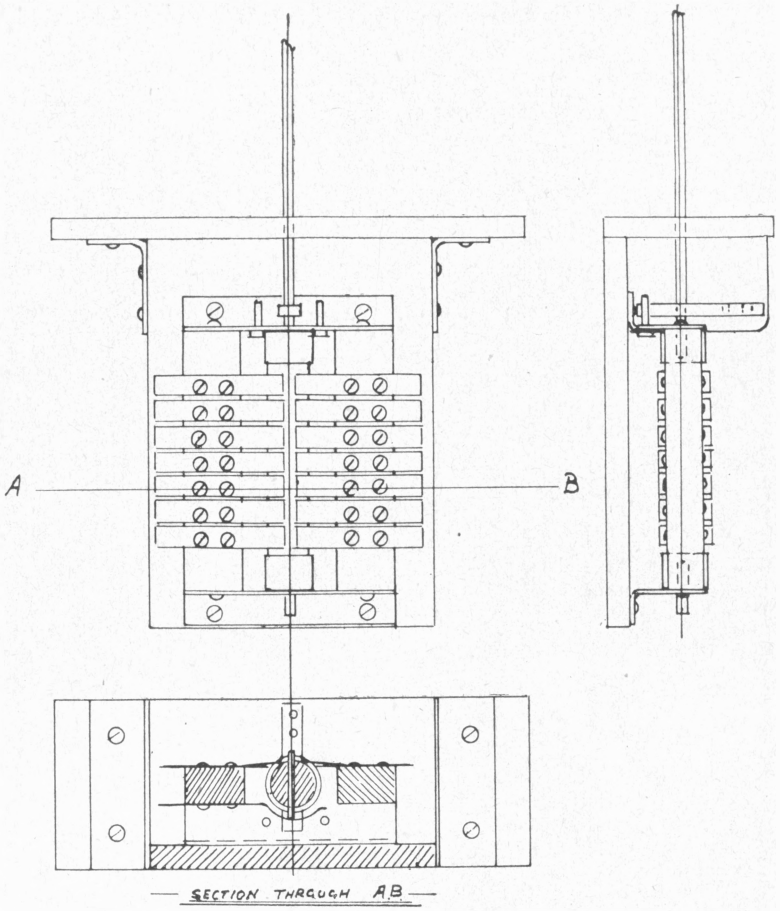
This should be made first. Suitable dowelling between $\frac{3}{8}$ in. and $\frac{1}{2}$ in. should be cut to length. File out two small

circles of brass and drill in centre. Attach to each end of rotor by $\frac{3}{16}$ in. countersunk woodscrews and solder in 3/32 in. steel or brass rod 4 in. or so long one end and $\frac{1}{2}$ in. the other. The centring of these rods should be as accurate as possible but is not vital, as the arc through which the rotors operate is very small. Next, drill No. 50 is pushed through the rotor at $\frac{1}{4}$ in. centres, and $\frac{1}{16}$ in. brass rod or stiff wire is forced through, standing proud each side about $\frac{1}{16}$ in.

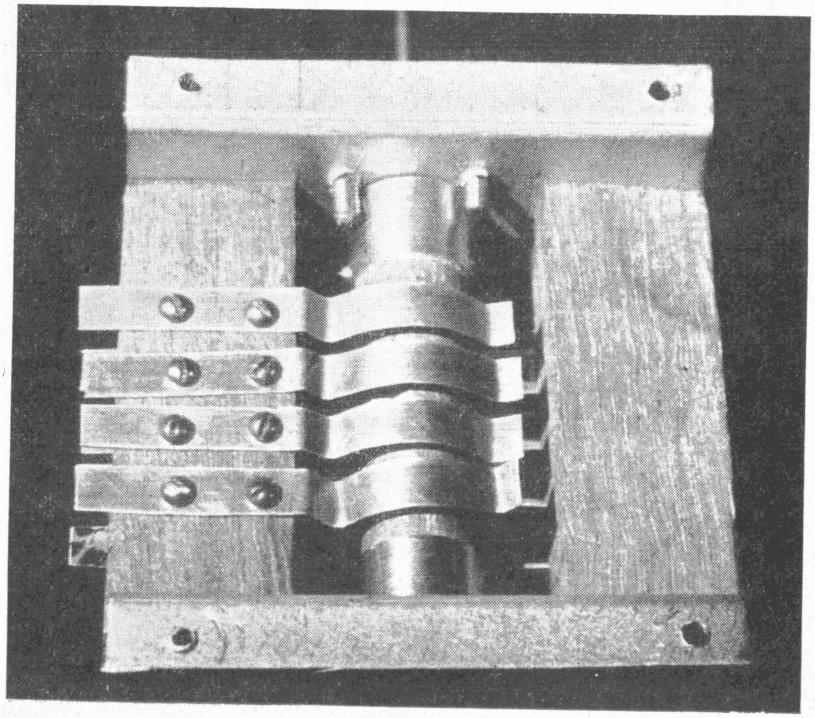
It will be noted from the photograph that the rotors are, in the authors' case, fitted into turned cups and cross-drilled for a retaining pin, and this method is recommended for those enthusiasts who have access to a lathe.

The body of the switch should now be tackled. Obtain or plane up strips of wood, say $\frac{3}{4}$ in. wide, and of a thickness equal to the diameter of the rotor. Mark out and cut two end plates, allowing about $\frac{1}{2}$ in. between the edge of the rectangular wood and the periphery of the rotor. Then screw the end plates to the wood with $\frac{1}{2}$ in. screws. In marking out the end plates the bearing holes for the rotor should be as accurate as possible for obvious reasons.

Next, mark out and drill the spring contacts—30 S.W.G. hard brass is satisfactory. The width should be $\frac{3}{16}$ in. and the holes drilled so that attachment to the wooden member by $\frac{3}{16}$ in. round-headed woodscrews does not cause splitting at the edges. The two rows of contacts at the top are straight with the extreme tip turned up at a slight angle to allow the pin on the rotor to engage smoothly. The single bottom row are bent round a piece of rod so that the pin is always in contact. Two screws per spring were considered essential to stop any twisting round in service.



Below: Back view of a four-contact switch



As will be seen, one further step taken has been to mount the switch on two pieces of plywood at right-angles, for fixing to the underside of the baseboard; connect the rotor spindle through the baseboard to the point, and operate the whole issue by the usual return spring-Bowden cable arrangement.

The total cost of six of these switches varying from seven-pole down to two-pole was 7s. 6d. but the spring brass metal for end-pieces and wood was salvaged from the rubbish drawer. Starting from scratch, however, and including the screws, the cost should not exceed 2s. each, which in the canny town of Newcastle upon Tyne is a matter for congratulation. On endurance tests these switches have proved to be faultless, and are considered to be as near foolproof as anything can be in this imperfect world, providing, of course, they are made with a reasonable amount of care.

Rebuilding a 4 mm. Scale

G.W.R. "Branch Line"

By Harry Bergamin

MANY readers of MODEL RAILWAY NEWS will probably remember the description of my G.W.R. layout entitled "Paddington to Broadsands" (April 1954 MODEL RAILWAY NEWS). Since that article was written I have attained what might almost be called a railway modeller's Utopia; in short, a light, airy room 12 ft. × 11 ft., centrally heated, with electric light and power laid on. All very nice, of course, but as usual there was a small cloud on the horizon for, try as I might, I just could not fit in the old layout without wasting valuable space. So, what to do?

After much thought, I decided that some of the existing layout was worth keeping, at least temporarily, so I laid the two 4 ft. sections containing my "through" stations (Tawford Junct.) along one wall, as in the plan. Then the two sections with the terminus, Broadsands, just fitted nicely along the opposite wall; the builder of the house has very accommodatingly put the chimney breast at one end instead of the centre of the wall! This part of the layout has now been modified to form a five-road "storage yard," with turntable serving all roads at the "dead end." This is where, in time-honoured (model) fashion, all trains leaving the branch will terminate.

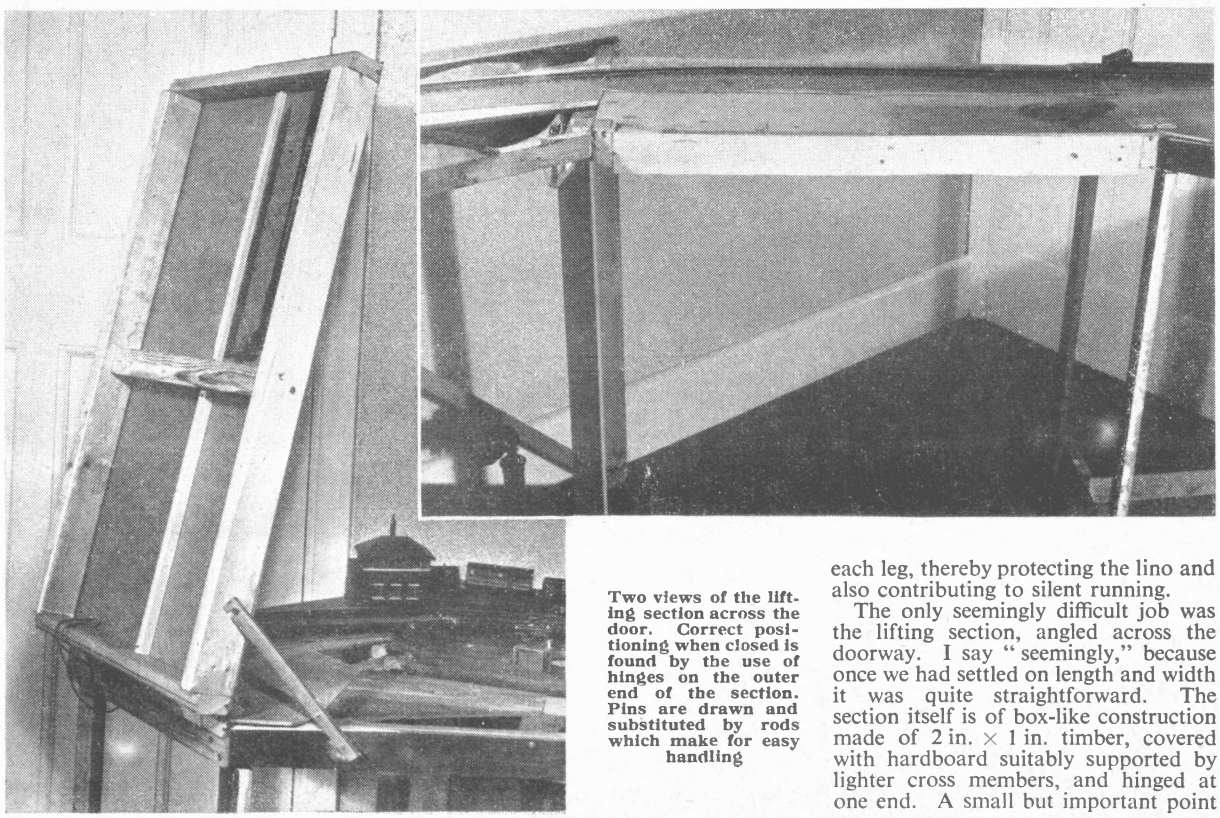
Now that I had more "elbow room" I wanted to have my "ideal" layout, that is a point-to-point layout with a good length of run, two termini, and a fairly important through station. I already had the through station, and one terminus (albeit a hidden one), so the rest seemed easy, but was it? I wonder how many modellers have found that however humble the projected layout or how large the space, as soon as one gets to work that space suddenly becomes about half its size.

After weeks of sketching and planning I decided that the second terminus would have to be at a higher level, with a maximum gradient of 1 in 60; this would mean, of course, a run of some 15 ft. from low to high level.

To achieve this, the line has been planned to run twice round the room; starting from the "storage yard," a train would run in a clockwise direction past the door (over the lifting section) through Tawford, past the windows and the starting point, over the lifting section again (but on another track) to where the gradient begins. The line now runs on the inside edge of the baseboard past Tawford and curving round until the high-level terminus is reached.

Now the heavy work began, building new baseboard structures between the existing ones, and here I was very fortunate in that two good friends and fellow modellers volunteered to help.

Materials consisted mainly of 2 in. × 1 in. timber and a large box of 1½ in. No. 8 screws (nails were taboo from the start). These 2 in. × 1in. lengths were for the main framework, as seen in the photographs. Construction was quite simple, no fancy joints being used, but the resulting structure is very strong. It may be noticed in the photographs that a fair amount of cross bracing is used between the legs of the structure. This is because we did not want to do any fixing to floor or walls. In addition, a piece of thick felt is inserted under each leg, thereby protecting the lino and also contributing to silent running.



Two views of the lifting section across the door. Correct positioning when closed is found by the use of hinges on the outer end of the section. Pins are drawn and substituted by rods which make for easy handling

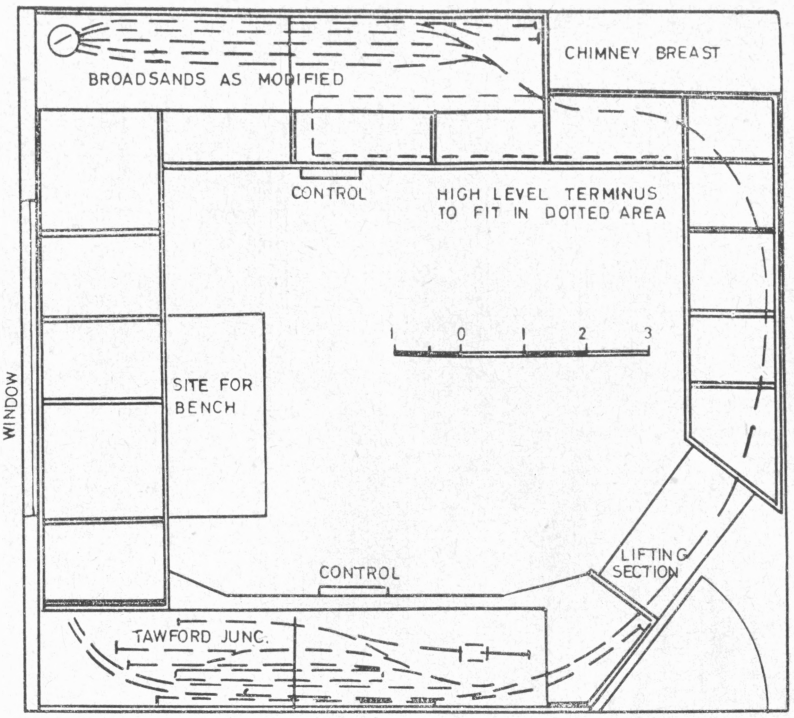
The only seemingly difficult job was the lifting section, angled across the doorway. I say "seemingly," because once we had settled on length and width it was quite straightforward. The section itself is of box-like construction made of 2 in. × 1 in. timber, covered with hardboard suitably supported by lighter cross members, and hinged at one end. A small but important point

about the hinges is that they *must* be fitted slightly higher than rail level, otherwise the rail ends will foul each other when the section is lifted. At the opposite end of the section a similar pair of hinges was fitted and the pins removed, two lengths of rod being substituted. These can be quickly and easily withdrawn when the section has to be lifted and just as easily inserted when closing, ensuring perfect location of the rail joints.

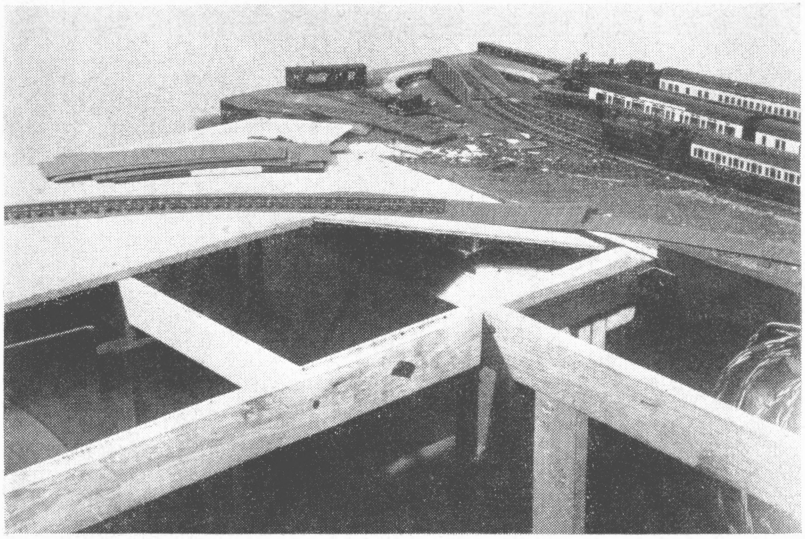
For the track sub-baseboards I have used all sorts of material from the "odd-box," but in many places I have used a very cheap source of timber, acquired from egg crates obtained from grocers for about one shilling. One crate will provide several yards of board a ¼ in. thick and about 5 in. wide.

At last we were ready to start laying some track, the first step being to link up the storage yard to Tawford Junction, *via* the lifting section, and as this is single line we soon had something running. In fact, it is surprising how interesting a time-table could be run even at this stage !

After the room had been laid with linoleum, I had a large number of odd strips left over, and as it is mainly cork it occurred to me that it would make a fine underlay with good sound absorbing



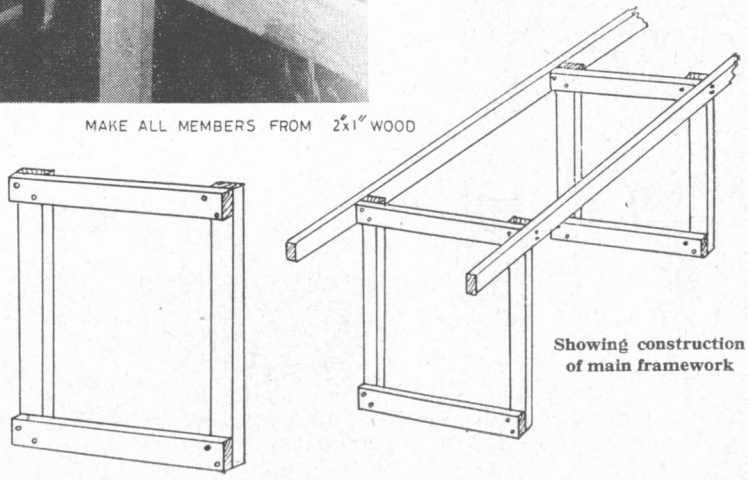
The layout so far (track plan not to scale)



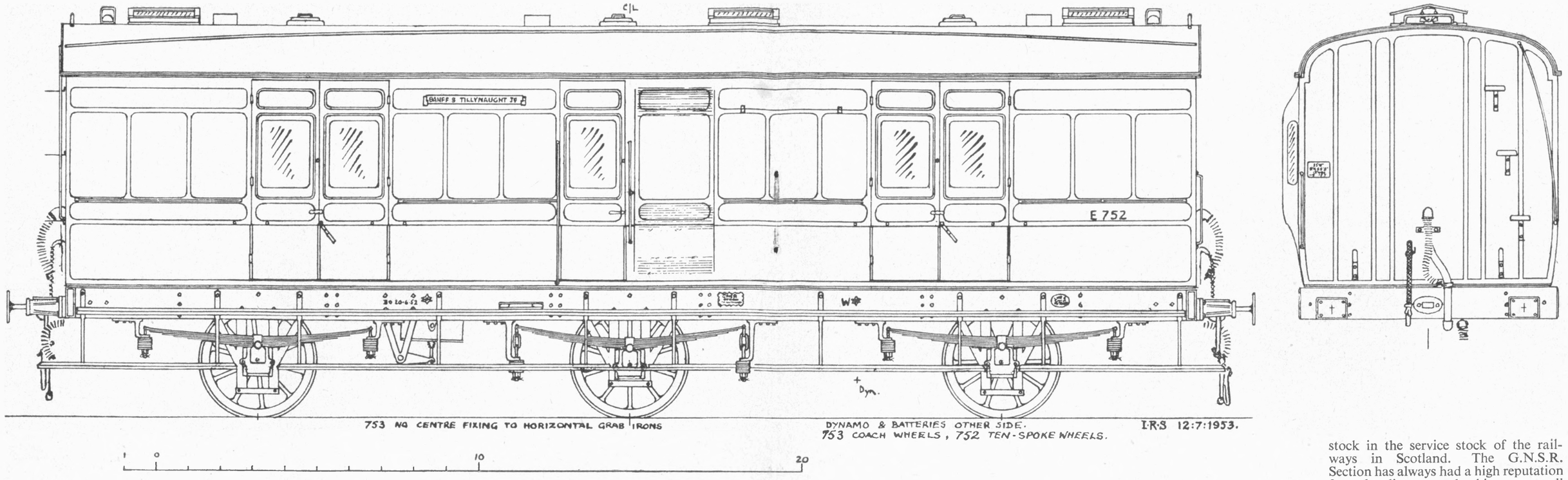
The turntable at Broadsands

properties. To make full use of the latter, the underlay was glued to the baseboard, and the track in turn glued to the underlay. Small shoemakers' tacks were used to hold down track and underlay during gluing. Every tack was afterwards removed; every one overlooked will seriously affect silent running. If any reader should decide to try this method, be warned against using a water glue, as I found this causes the underlay and the fibre sleepers to curl up and ruin the whole thing. The best adhesive for the underlay, although perhaps a little expensive, is, I think, Bostik cement. For the track, my favourite method is to paint the underlay liberally with dark brown *gloss* paint and immediately laying it in position. Whilst the paint is still nice and "gluey" (hence the use of a gloss paint—plenty of varnish), the ballast can be sprinkled on.

Having tried various kinds of ballast, I have now decided to use Maw seed, as recommended by Mr. J. H. Ahern in MODEL RAILWAY NEWS some time ago. For 4 mm. track I think it takes a lot of beating, as the size and colouring are just right.

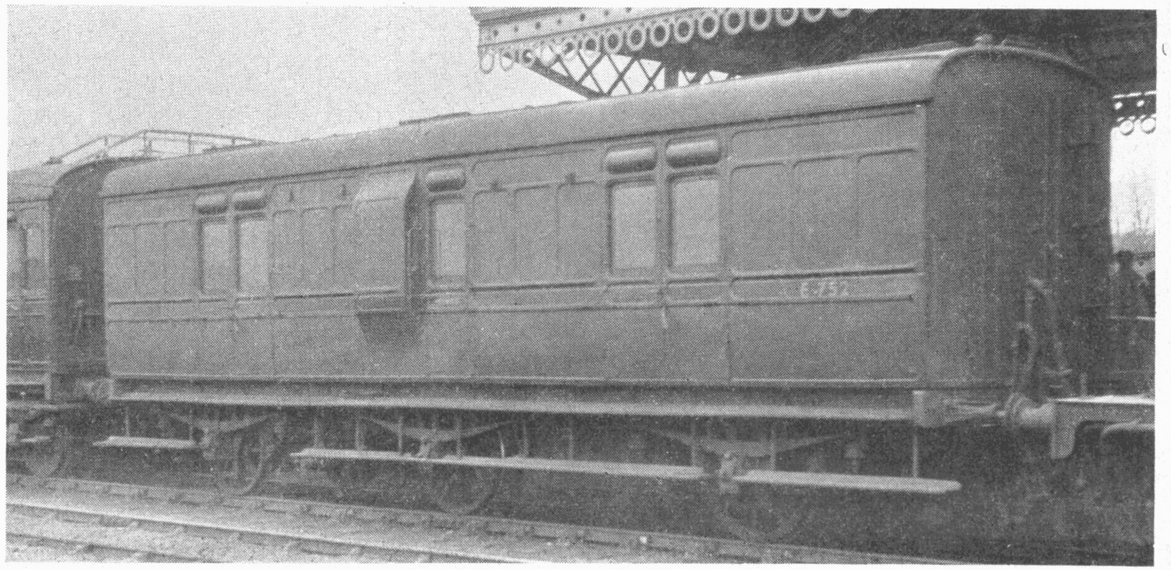


Showing construction of main framework


BANFF & TILLYNAUGHT JN
E 752
753 NO CENTRE FIXING TO HORIZONTAL GRAB IRONS
DYNAMO & BATTERIES OTHER SIDE.
753 COACH WHEELS, 752 TEN-SPOKE WHEELS.
I.R.S 12:7:1953.
1 0 10 20

GREAT NORTH OF SCOTLAND RAILWAY

Six-wheeled Full Brake



The G.N.S.R. six-wheeled full brake, No. 752

By Iain R. Smith

THE six-wheeled full brakes illustrated were the last of such a type built by the Great North of Scotland Railway but are not conveniently provided with a date plate. I think they would be built at Inverurie either about 1916 or about 1922, and their contour was similar to that introduced in 1906 for main line stock. They may well be the last G.N.S.R. six-wheelers on revenue-earning service on passenger trains, although there are one or two earlier types running as service vehicles or as stores vans attached to passenger rakes between Cowlairs and Carlisle (Canal) *via* the Waverley route. Length is 35 ft., width over body 8 ft. and over lookouts 9 ft., height from foot of body to top of roof 8 ft. 1 in., wheelbase 23 ft. evenly divided, weight 15 tons, springs 7 ft. long with nine leaves on the end springs and eight on the middle ones. No. 753 of this series ran for a long time during the war between Keith and Dalcross with R.A.F. laundry for the latter place, although sometimes an ex-G.E.R. brake was on that fatigue, and No. 753 had ordinary coach wheels then.

The G.N.S.R. stock was like the people of the district it served, rugged, substantial and clean. It was of a pleasing design and built of the best materials, and when six-wheelers were being scrapped, those of the G.N.S.R. were found very difficult to condemn. It is significant that there is a high proportion of ex-G.N.S.R. six-wheeled stock in the service stock of the railways in Scotland. The G.N.S.R. Section has always had a high reputation for cleanliness, and this was well maintained during and since the war, the passenger stock rapidly returning to the clean lined-out varnished teak of pre-war years, and somehow looking much more smart and modern than it really was. Even the last types of G.N.S.R. stock are now vanishing, and those that remain are relegated to secondary duties.

FOR THE BOOKSHELF

Footplate and Signal Cabin, by Norman Marlow. (London: Allen & Unwin Ltd.) 222 pages, 5½ in. by 7½ in., with index. Illustrated. Price 20s. net.

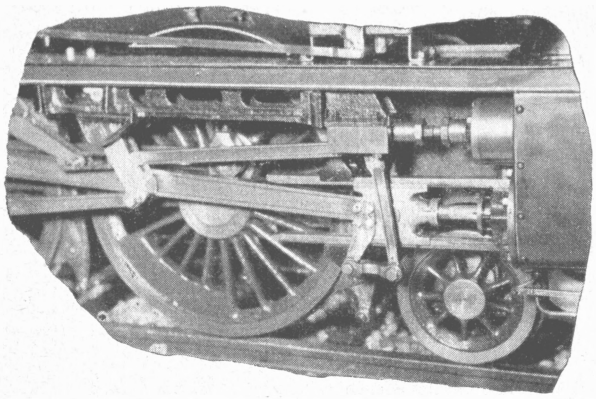
This is one of the most fascinating "railway" books ever written; in one respect we believe it to be unique, in that it describes, in a lengthy and delightful manner, in its opening chapters, the feelings and reactions of a schoolboy who is, or was, deeply and irrevocably interested in railway engines, trains and everything else pertaining thereto. This part of the book is truly alive and henceforth must remain one of the classics of railway literature.

The succeeding chapters, however, are scarcely less captivating; they describe the author's personal experiences over a period of some 30 years, during which he has been privileged to ride as a passenger on locomotive footplates and to work, often alone, in main-line signal cabins, usually at Kettering, as a part-time, but fully trusted and qualified, amateur. To very few of the thousands of railway enthusiasts are such privileges granted; still fewer have the ability to set down such an absorbing record as that presented to readers by Mr. Marlow. Every conceivable aspect of railway signalling and traffic working is described and explained in detail, yet it is all done in simple, straightforward language which ensures that the book must appeal to and be readily understood by any reader, regardless of sex or training. The style is lucid in the extreme and so entertaining to read, with its many flashes of humour; there is a chuckle, or at least a smile, on nearly every page. There are touches of drama and sentiment as well, but nowhere the slightest suspicion of mere sentimentality.

The illustrations, of which there are 15, are all full-page reproductions of first-class photographs, most of them by Miss Helga Tye, who must certainly be reckoned among our expert railway photographers; she has a keen appreciation of technical significance combined with pictorial effect.

There is some evidence of hurried proof reading, but the errors are mostly typographical; a rather startling mistake, however, occurs during a first-class description of a footplate trip on G.W.R. engine No. 5003, *Lulworth Castle*, in which we are told, on page 115, that "the pressure never flickered from 240 lb."!

There are recollections of footplate trips on a Western "King" and "Castle," a Southern diesel-electric and a Midland "Royal Scot." In addition, there is a rather vivid description of the testing of a Midland 2-6-0 engine on the Rugby test plant, with explanations of the technical information being obtained; but, above all, there are precise details of several different happenings that can and do cause those delays which give rise to the exasperation of passengers, and they have the great advantage of coming from one who is not only a died-in-the-wool railway enthusiast but has himself suffered exasperation. This timely and very enjoyable book should do much to frustrate the many irresponsible critics of our railway system.



The Walchaerts valve gear on W. Miller's 7¼ in. gauge loco, "Duchess of Brighouse"

Three Ways with Walschaerts

By J. R. SUTHERS

I HAVE always found a peculiar charm in the moving tracery of Walschaerts valve gear, and it is not surprising, therefore, that when I started to model locomotives, I should lean towards those fitted with this fascinating feature. I am sure there must be many who share my liking, but who are deterred from attempting to make it by the apparent complexity and delicacy of the moving parts. I hope that when they have read my experiences, they will pluck up their courage.

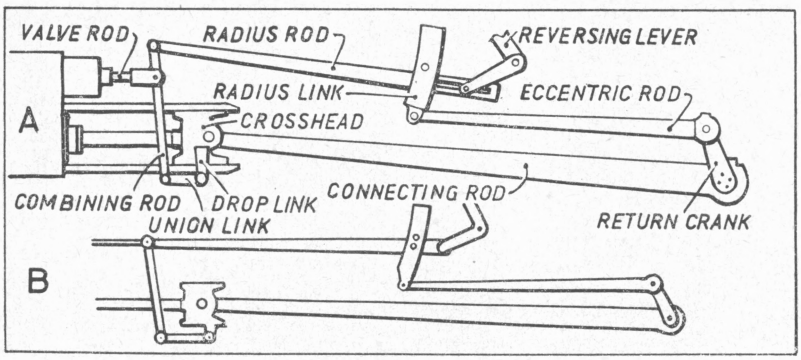


Fig. 1

There are three ways in which this gear may be modelled, and I started with the simplest form, similar to that used in Dublo Pacifics. No great skill is called for in this method, merely the ability to drill holes, use a hacksaw, a file and a soldering iron, and a quantity of that priceless commodity without which no one can make models—patience.

I have shown all the parts of the gear in Fig. 1A, and the simple version in Fig. 1B. The first step is to take a suitable piece of nickel-silver sheet (25 S.W.G. is very suitable, though it is not critical; it may be a little thicker or thinner) and on it mark with a scriber several straight lines along the grain of the metal, about ¼ in. apart. Next mark along these lines the distances between the pivot holes of the various rods, remembering that you will require two of each, one for each side of the locomotive. Now carefully centre-punch all these marks, and drill them with a No. 70 drill. Here may I digress to say that you will save a lot of drills, and your temper, by using a pin-chuck in your hand-drill; one may be obtained quite cheaply. Having drilled all the holes, the next step is to cut out all the parts. This is done with the hacksaw and files. Saw the pieces roughly to shape, then place each carefully in the vice, so that the two holes are in line with the top of the vice

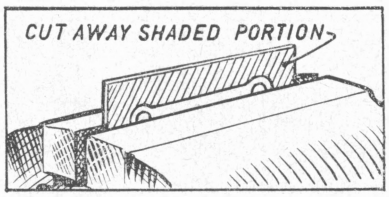


Fig. 2

(Fig. 2) and file to shape. Then turn the piece the other way up in the vice, and shape the other side in the same way. Incidentally, a small vice that can be held in the hand is very useful for this sort of work. Note that the radius link should be curved, unlike the other rods.

The next job is the crossheads. These can be made quite simple, as in Fig. 3A. A piece of wire, of suitable gauge for the hole in the cylinder, is bent at one end to form a loop. Two pieces of nickel-silver are shaped as shown, and soldered one on either side of the loop. The little-end of the connecting-rod is then attached, behind the crosshead, by means of a pin through the rod, then through the crosshead, soldered, and the surplus cut off. At this stage it may be well to point out that in soldering two moving parts together, the best method is to place the pin through one, then through a piece of paper, and then through the other, to which it is soldered. The paper is then torn away, and a freely moving joint is the result.

Now assemble the various parts which you have cut out, soldering the pins at the back of the rear moving part. Notice that the valve-rod is made by soldering a small washer to the pin behind the junction of the radius-rod and the combination link, thus leaving both free to move independently of the pin, which is bent at right angles to form the valve-rod. The pin should be bent first, then the two rods and the washer should be threaded on, and the washer soldered in place.

The eccentric-rod should be joined to the return crank before this is soldered to the crank-pin. If you are using wheels which are not fitted with a crank-pin, a good thing to use is a flat-headed brass

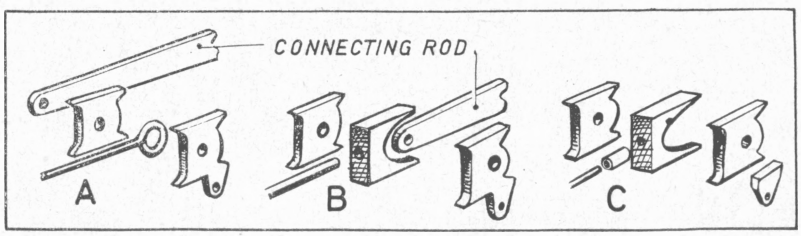


Fig. 3

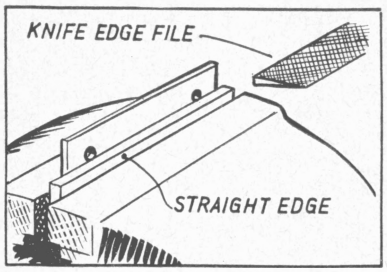


Fig. 4

pin of suitable thickness. The pin itself should be squeezed in the pliers, and then, after inserting through the connecting- and coupling-rods, forced into its hole in the wheel. The flattening caused by squeezing in the pliers will help it to " bite," and prevent it working loose. The return crank can now be soldered direct to the flat head of the pin.

So much for the simple method. For my next effort I resolved on something which looked more like the real thing. The locomotive I was building was an L.M.S. Class " 5," and several of the rods are fluted. The preparation of these is not such a formidable job as it might seem. Mark and drill the parts as before, except for the radius link, of which more anon. The fluting can now be done by means of scraping, and a knife-edge Swiss file, with the end broken off, makes an admirable tool for this. Place the part to be fluted in the vice, with a straight-edge, so that the drilled holes are just clear of the straight-edge (see Fig. 4) and, using the back of the broken file, scrape away, and you will very soon have produced a very satisfactory groove. The secret of success, incidentally, is to keep the tool pressed against the straight-edge while scraping. In this way you will get a clean, straight, groove. When this is done, cut out the parts to their correct size, as before.

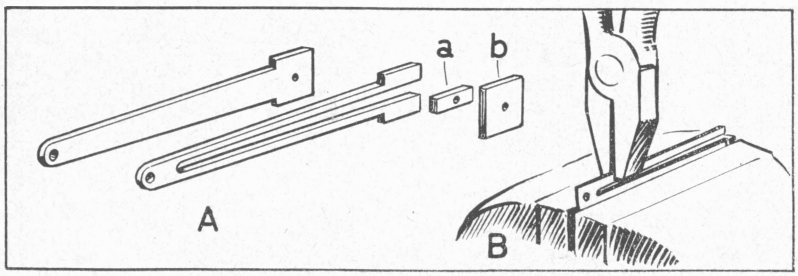


Fig. 6

The attention of readers is drawn to a Percival Marshall publication entitled " Walschaerts' Valve Gear " and priced at 3s. 6d. The book is written by Henry Greenly and is extremely well illustrated with diagrams and perspective drawings.

To look really well, the radius-link must be a trifle more " 3D " than the plain one used in our first effort. And it is built up as shown in Fig. 5B, which requires little explanation. It is best to mark and centre-punch the holes in the outside piece (a) before assembly, then insert a packing-piece between the two sides, and drill right through after assembly. In this way you ensure correct alignment of the holes.

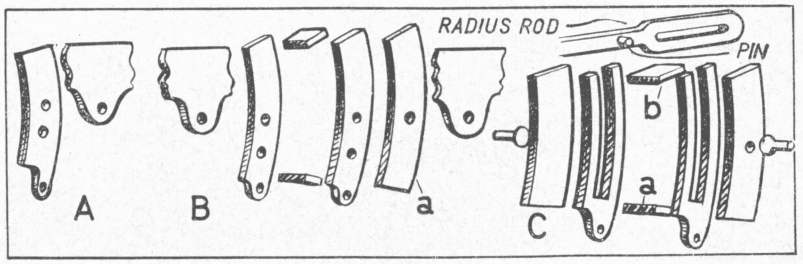


Fig. 5

Now insert the radius-rod through the radius-link, pin through the lower holes, and solder. The little-end of the connecting-rod is fixed in place between the two side extensions at the bottom of the link.

A more ambitious crosshead is needed, too, and Figs. 3B and 3C show the method, with an elaboration. The centre-piece is first drilled longitudinally, to take the piston-rod. The deep notch at the rear, to accommodate the little-end of the connecting-rod, is then filed out. My own method is next to attach the two sides simply as rough squares, and then shape the whole job at once, after assembly. To assemble, tin the surfaces, and the rod for the piston-rod, insert the piston-rod, taking care that it does not protrude at the rear, place the side pieces in position, not forgetting an application of flux, grip the whole lot firmly with a pair of long-nosed pliers, and hold it in the flame of a blowlamp (or your wife's gas stove, if she isn't looking !). In the case of the more finely detailed effort (Fig. 3C) the small drop-link is made separately and soldered in place afterwards, taking care to hold the crosshead firmly whilst doing so; otherwise, you may find the whole thing coming apart.

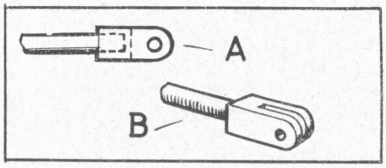


Fig. 7

The connecting-rod on a Class " 5 " is fluted, and I found a simple way to make this was that shown in Fig. 6A. First, a long cut is made with a hacksaw, then the hole is centre-punched for the little-end. Next, place one side of the metal in the vice, so that the cut is just clear of the jaws, and parallel to them (Fig. 6B). Grip the other side with the pliers as shown, and gently but firmly open the cut very slightly. This will make the fluting wider at the big-end of the rod. Now sweat this to another piece of metal, insert a small packing-piece (a) at the correct distance from the little-end, add an outer layer (b), and solder in place. Mark and centre-punch the hole in the big-end, drill both big- and little-end holes, and saw and file to the correct shape. A similar method may be used to make fluted coupling-rods, where necessary.

The valve-rod is the next item that calls for explanation. Take a piece of metal of $\frac{1}{16}$ in. square section, and drill longitudinally for the valve-rod for about $\frac{1}{16}$ in. (Fig. 7A). Next drill through, laterally, about 5/32 in. from the end you have already drilled. Now solder the rod into the end, and cut off just behind the transverse hole. Now make a cut with the hacksaw from the rear to within $\frac{1}{16}$ in. of the front, shape up with a file, and the job is done. Fig. 7B will make this clear.

My latest locomotive is a " Duchess," and is not yet completed, but I have managed to fit fully working valve-gear, and, just in case anyone is interested, I shall explain how I made the radius-links, so that the radius-rods will slide up and down for reversing. The various parts

(*Continued on page 110*)

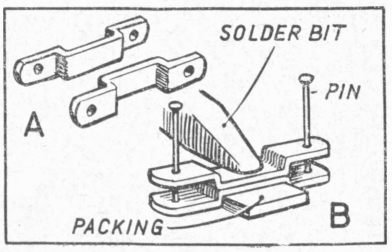
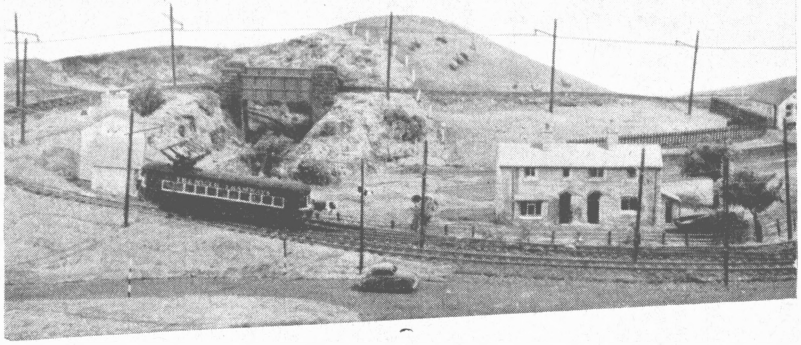


Fig. 8

THE TRENUTH TRAMWAYS

By H. S. ORBACH



Built to gain practice in construction. An idea worth thinking about if you are really short of space

AS Queen Victoria's reign drew to its close, Britain witnessed the final developments of its railway system. Since Spooner demonstrated the advantages of steam traction on narrow-gauge rails on the Festiniog Railway, a number of similar lines had been built, tapping traffic potentialities that previously had seemed inaccessible by standard-gauge railways.

In a certain industrial town, the shrewd factory owners were quick to realise that a narrow-gauge line into the hills surrounding their little town would facilitate the transport of their raw materials directly to their mills, the traffic consisting of wool, livestock and agricultural produce. An Act of Parliament was duly obtained in 1886 to construct a railway some 18 miles long to a gauge of 3 ft., the line being completed within two years, and opened with the usual convivialities.

The far-sighted directors soon appreciated the clean air and the beauty of the moors, and quickly transferred their families and effects to the village of Trenuth, the upper terminus of their little railway.

Their carriages would drive up briskly at the station shortly before the train departed at 8 a.m. sharp, bound for the distant smoke and haze that signified their hopes and fortunes.

In time the newly-formed middle-classes discovered the merits of Trenuth, and soon new villas and roads sprang up near the village. Some of these communities were some distance from the station, which made travel in inclement weather a hazardous business, particularly if the commuter sported one of those horseless carriages.

Finally, it was decided to build a tramway to link these hamlets with Trenuth and the railway. Thus came the electric tram to the hills and villages of Trenuth, one of the few inter-urban lines built in this country. At first it linked the station with the village about a mile away, later being extended to Newtown, three miles beyond. The service was opened with a number of American Birney four-wheeled cars, the average service interval being half-hourly.

Just before the 1914 war, as the line was enjoying unprecedented prosperity, the company decided to undertake a number of improvements. These included construction of a four-mile long loop past Upper Farm, which involved some heavy engineering work, including a deep rock cutting, the doubling of the roadside track through Newtown, and the construction of a turning-circle in Trenuth.

The Upper Farm loop was abandoned for passenger service in 1938, when some new bogies cars were obtained secondhand from the Indiana Railroad in the U.S.A. This line has now had the overhead equipment removed, and a small four-wheeled diesel is employed for a twice-weekly freight train, which serves some of the more outlying farms.

Only one of the original four-wheeled cars remains, restored to its original cream and apple-green livery, and used for an occasional fan trip organised by an eccentric society in far-away London. The bogie cars are now approaching the end of their useful lives, and the question of their replacement has been considered by the directors. In view of the hilly nature of the district, replacement by buses, though cheaper initially, would have proved uneconomical, as well as being unpopular with passengers. As a result, it was decided to perpetuate tradition of purchasing American trams, and it is hoped to obtain a number of secondhand P.C.C. bogie cars from Chicago. These cars will be painted in the standard Trenuth Tramways livery of olive green with white upper panels, all lettering being yellow; it is hoped that these cars will enter service during 1955 and that they will set a new standard in local transport.

The last war dealt unkindly with the narrow-gauge railway serving Trenuth. Most of the goods traffic has been captured by road transport, and the ubiquitous omnibus now provides the means of long-distance travel; the trams, however, still fulfil admirably their original functions of linking together the various communities. It is rumoured that the railway will soon withdraw its weekly goods train, so that the valleys will echo no more the sharp exhaust, of the friendly little tank engines, tackling the steep gradients for which the line was famous.

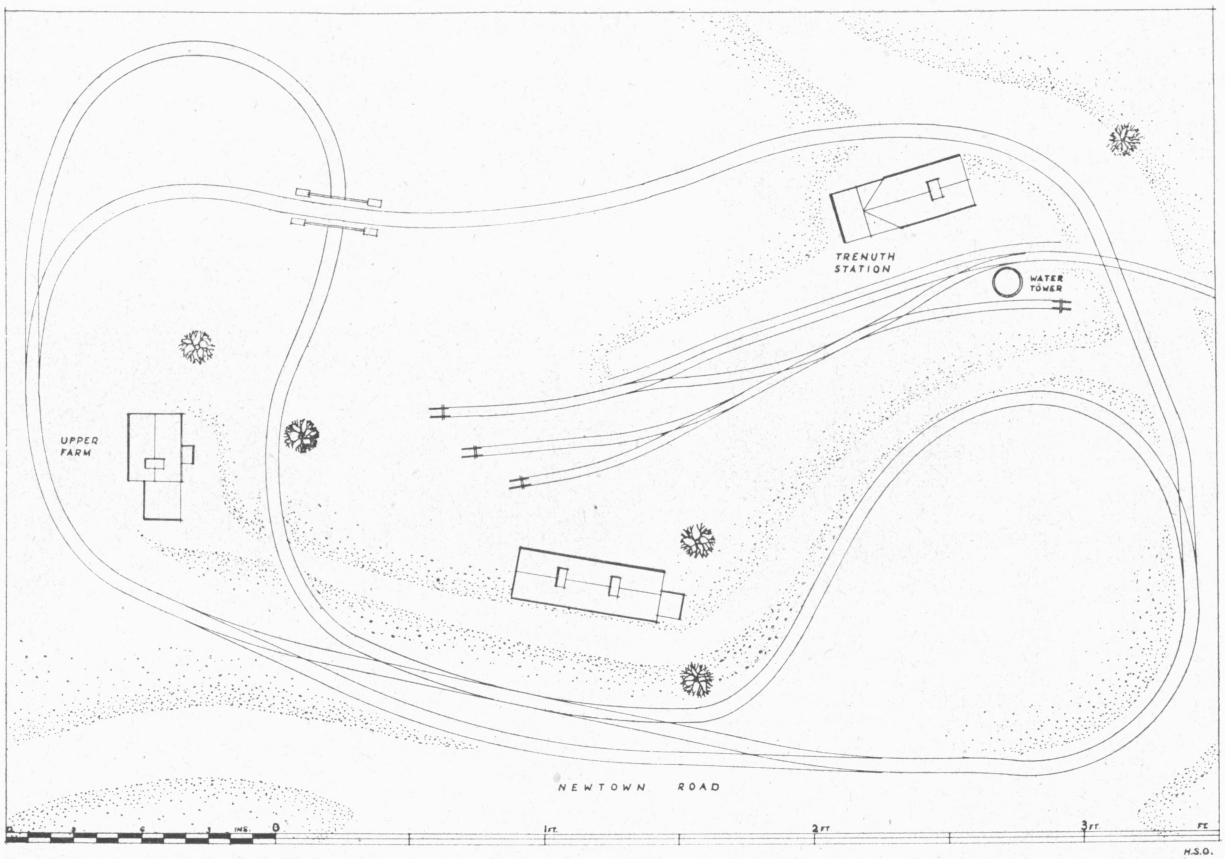
Construction

After six years of armchair-modelling, I seemed no nearer to a permanent layout of my own, as furnished rooms and landladies do not seem conducive to 4 mm. model railways, so I decided to build a layout that would give me some experience in construction, especially scenery and wiring, whilst at the same time providing interesting operation. Possibilities included a small industrial line, a section of my proposed Garve & Ullapool Railway that could be incorporated in a permanent scheme, or a tramway. Sentiment won, and "the Trenuth Tramways" was duly incorporated.

Overall size of the layout is 4 ft. 6 in. × 3 ft. 1 in., minimum radius curves being 7 in. The turnouts are 3 ft. radius, with two exceptions, these being 1 ft. 6 in. radius. Construction is of 2 in. × 1 in. timber members at approximately 9 in. centres, screwed to a perimeter of similar members. The layout was drawn on a sheet of hardboard, and the outline of the trackbed fretted out, thus forming a "web," that gave smooth transition for gradients, overcoming the usual awkward junction between baseboard and gradient. Where the "web" crosses the timber supports, it is packed as required with wood and hardboard offcuts.

On top of hardboard trackbed ⅛ in. thick cork (available in sheets from the Cork Shop in Farringdon Road, E.C.1—customary disclaimer !) was glued, the edges being chamfered. The fibre-based track was laid on this and finally ballasted.

The scenery was supported by expanded duralumin, screwed to the framing, and bent to the required form.

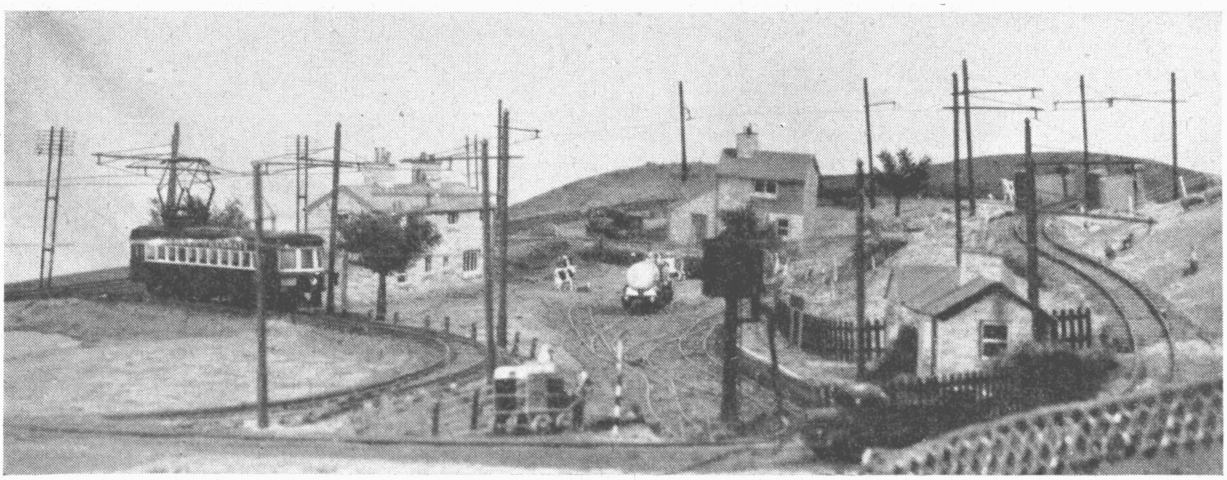


This is an expensive method of supporting scenery, but makes for lightness and permanency of shape. Ordinary medical lint was glued to this, and painted with water-base poster paints, of different shades of green. The rock cutting by Upper Farm and the road by the station were formed of asbestos cement, a material that tends to crumble and to which glue does not take kindly.

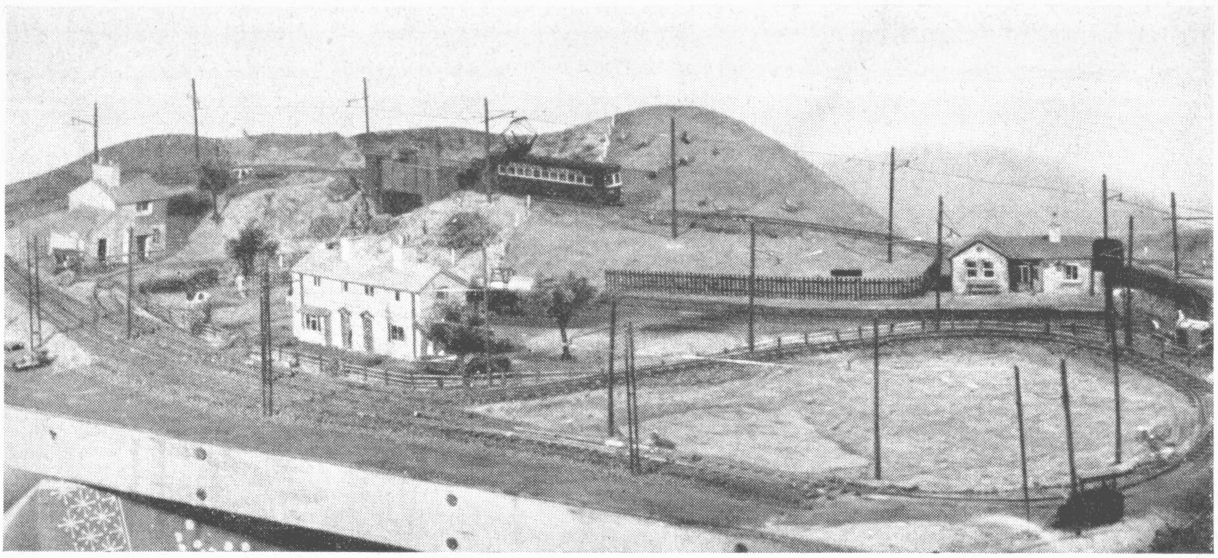
On a portable layout rocks are probably best simulated by coal, painted, lumps of cork, or suitable tree bark, as used very successfully by Sir Eric Huchison. The asbestos cement road surface wears badly and will be replaced shortly with painted emery cloth, glued on the surface.

The buildings were made of card, shellacked, and covered with artists' not pressed paper, on which all details were painted whilst on the drawing board. Windows and doors were cut out, corresponding openings cut roughly into the assembled card structure, and the paper glued to the card, not forgetting reveals to each opening, these being the thickness of the card.

The overhead wires are of 28 S.W.G. phosphor bronze, supported by wood



Trenuth Station and the water tower in foreground. The tram track disappears over the hill on the right



Newtown Road in the foreground and a front view of Trenuth station on the right

poles. These are very simply made of $\frac{1}{8}$ in. dia. wood dowelling, drilled to take the brass arm, which is glued into place. The stay is of fine steel wire, soldered to the brass arm at one end, and glued into the pole at the other. The finial is taken from a string of appropriate beads from Woolworth's, price 1s. 6d., one necklace providing approximately six dozen finials. They are pinned to the poles with ordinary pins. Around the base of the poles are a couple of layers of gummed parcel tape, to give the appearance of additional thickness. A split-pin is soldered to the brass arm, and to this is soldered the overhead wire, though this method is not suitable for trolley pole operation. As a result, the tramcars had to be fitted with Marklin pantographs, which gives them a more satisfactory appearance, as well as improving current pick-up. The poles are given a coat of glossy medium-green paint.

Certain items on the layout, e.g. the Marklin lorry, were painted flat black, and for this I have successfully used Hilton's "Berlin Black," a matt stove polish that will show up every detail, however bady the polish is applied. I have recently used it on some coach chassis, and find it admirable.

The tram is an American model of an Indiana RR. inter-urban car, made by Pennsylvania Models, who produce also a P.C.C. car and an old-time streetcar.

I have also tested one of the all-nylon bodied Mantua four-wheeled cars, and find their performance and detail first-rate. The chassis seems to approximate to a number of British trucks and, provided the wheelbase is suitable, might be utilised for British prototypes, such as the "Metropolitan" Class E car.

In conclusion, I do hope that a manufacturer will soon produce a 4 mm. model tramcar that can form the nucleus for a simple layout in itself, or could be incorporated in nearly any model railway. A single-deck car, such as a Grimsby & Immingham car of the G.C.R., would be ideal, as it would satisfy the pre-grouping, inter-urban, and urban tramway enthusiasts, whilst avoiding difficulties due to bridge clearances.

Three Ways with Walschaerts

(*Continued from page 106*)

are shown in Fig. 5C. The inner portions —the actual slides—are best made with a piercing saw. Each side of the link is then sweated to its outer portion, which is first centre-punched, and the grooves cleaned up with a file. The spacer (a) is then soldered in position, using a spacing-piece to keep the sides apart at the top. The best way to make spacers (a) and (b) is to use a fairly long piece of metal, and cut away the surplus after soldering. After soldering (a), insert the radius-rod, in which you have previously soldered a pin (Fig. 5C). Make sure that the radius-rod moves freely up and down the link, and then, with the radius-rod at the bottom of the link, insert spacer (b) at the top, and solder in position. It is best to use a mouth blowlamp for this, otherwise the whole will solder up solid. Hold the work in the long-nosed pliers whilst doing this.

The final job—fitting the pivot pins—is rather ticklish, and calls for care. A touch of oil inside the slides will help to prevent the radius-rod becoming soldered to the slides. One pin is placed with the head in the dent made by the centre-punch in the side of the slide, and soldered there. To do this, lay the slide on a flat surface, press the pin into the the dent, apply the soldering-bit, and *remove it as soon as the solder flows*. Then turn the slide over, having made a suitable hole in your working surface for the pin, and solder the other pin in position.

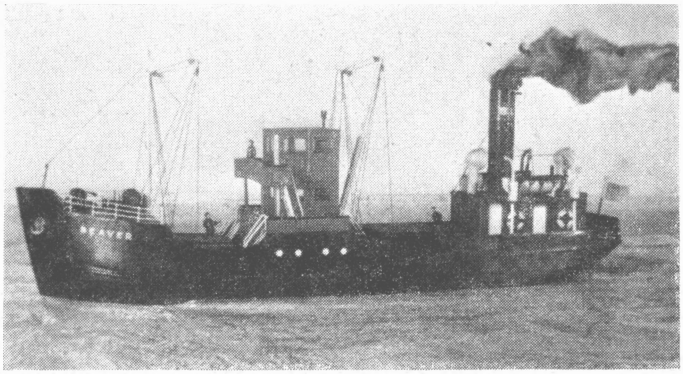
One last refinement is the union link. It will be found that on prototype locomotives, this is forked at the ends, and the rods fit between the forks. To make such forked rods is not difficult, as is shown in Fig. 8A, while Fig. 8B shows the best method of soldering the parts together. It is better to use rather thinner material for this.

If I have appeared to go into a great deal of detail, it has been to help those who have not so far attempted such work. I do not claim to be an expert, and have frequently read articles in which the writers have assumed that the reader knew more than, in fact, a novice does. And if these notes help a few people to have one-half the fun and satisfaction I have had myself in making these gears, I shall be well pleased. Lest anyone should feel that the full working gear is too bulky or thick, I may say that my "Duchess" is for 18 mm. gauge, and there is no lack of room for it on the model.

A Coastal Vessel

in 4 mm. scale

By John M. Cox



The small coastal vessel, "Beaver," in 4 mm. scale

IN order to add some realism to a projected layout, I decided that I would incorporate a small harbour which, besides adding to the scenic attractions, would give some extra purpose to the construction and running of the railway. At the same time it would give me the opportunity to build a ship which in itself is a welcome change from strictly railway work. Having completed one ship, m.v. *Campfield*, from the drawings and article by Mr. W. F. Bolton in the MODEL RAILWAY NEWS for May 1941, it was not long before I began to think about "laying the keel" of another, only this time I had the idea of using a much older ship as the prototype.

A Studied Prototype

Some time previously I had seen a photograph of an old coastal vessel taken on the Manchester Ship Canal, so this was duly sorted out and studied. It seemed to be just what I needed. At the outset it was not intended that this particular ship would be copied down to the last coil of rope, but rather that it would form a guide from which to draw my own design. This was not so simple as it may seem, for many snags cropped up. It was difficult to know how large to make each component part and also leave enough room for the rest of the detail. I came to the conclusion that not an inch of space is wasted on the real thing. It is more than likely that I did make a few mistakes when drawing the plan, which may annoy any nautically-minded readers, but the main thing to me was to build the ship so that it looked right, and I am satisfied that this has been achieved fairly well. At the same time I did go to the trouble of visiting the library for reference purposes, and I also made several journeys to the canal bank with notebook and pencil.

Construction

To start with, I naturally shaped the hull, and after the deck levels had been made to about $\frac{1}{8}$ in. lower than in the drawings, I covered these with $\frac{1}{8}$ in. brown card (previously scribed to represent planking). The sides were then covered with cardboard about $\frac{1}{16}$ in. thick, this being extended above deck level to form the bulwarks. I didn't use one piece of cardboard to go right round the hull, but used three large ones and several small ones. The first two large ones were glued from the bow to the beginning of the stern, a few tacks holding them in place whilst

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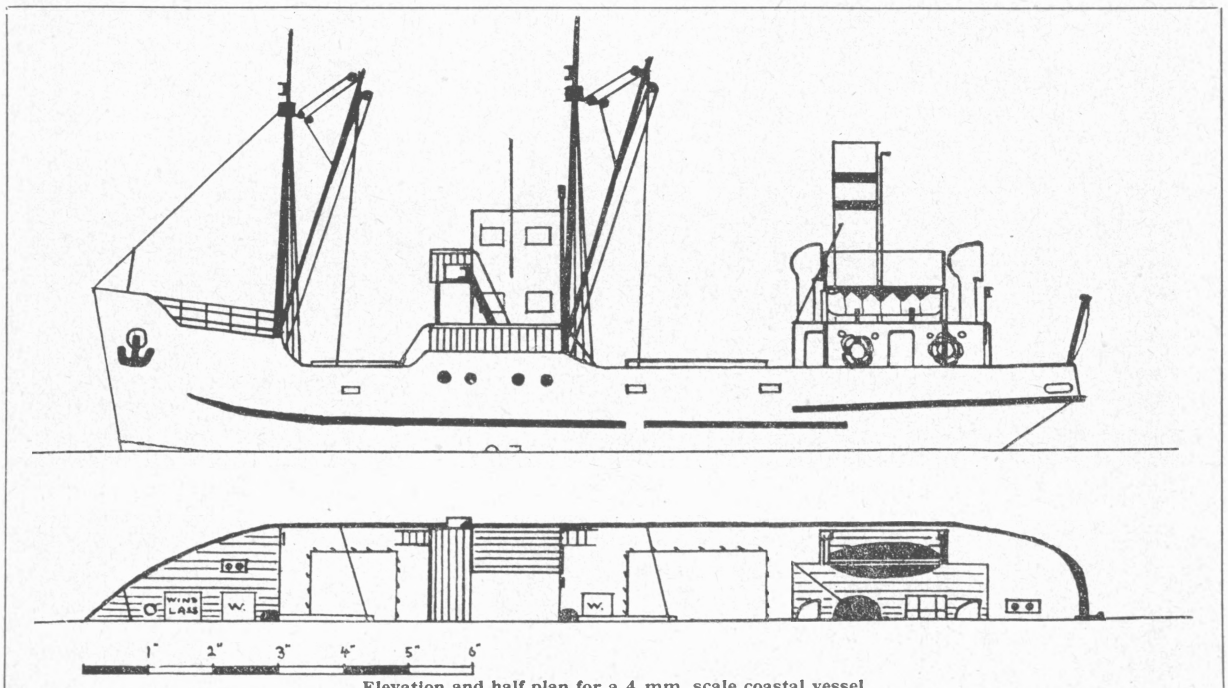


Elevation and half plan for a 4 mm. scale coastal vessel

A GAUGE 'ONE' GARDEN RAILWAY

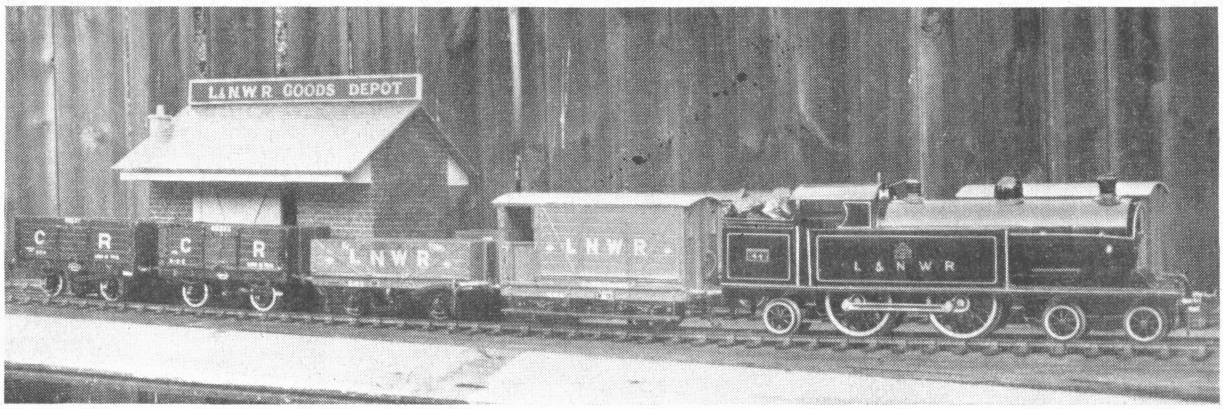
RAILWAY modelling is often a question of patience long before construction is commenced, and if one successfully bides the time necessary to make a living, emerging keen, then the patience frequently prescribed by writers of handbooks comes naturally. In 1923 Dr. G. P. Stilley conceived the idea of a gauge "1" garden layout with the emphasis on the Caledonian Railway, and it had to wait until the '50s to crystallise. If there is any truth in the maxim that anticipation is four-fifths of the pleasure, Dr. Stilley is indeed a happy man, for he derives no mean measure of it now that construction is under way.

Although only half complete at the moment the line will eventually consist of nearly 300 ft. of track, based around the mythical Gretna Junction, somewhere north of Carlisle, where the Caledonian, North Western and Midland meet.

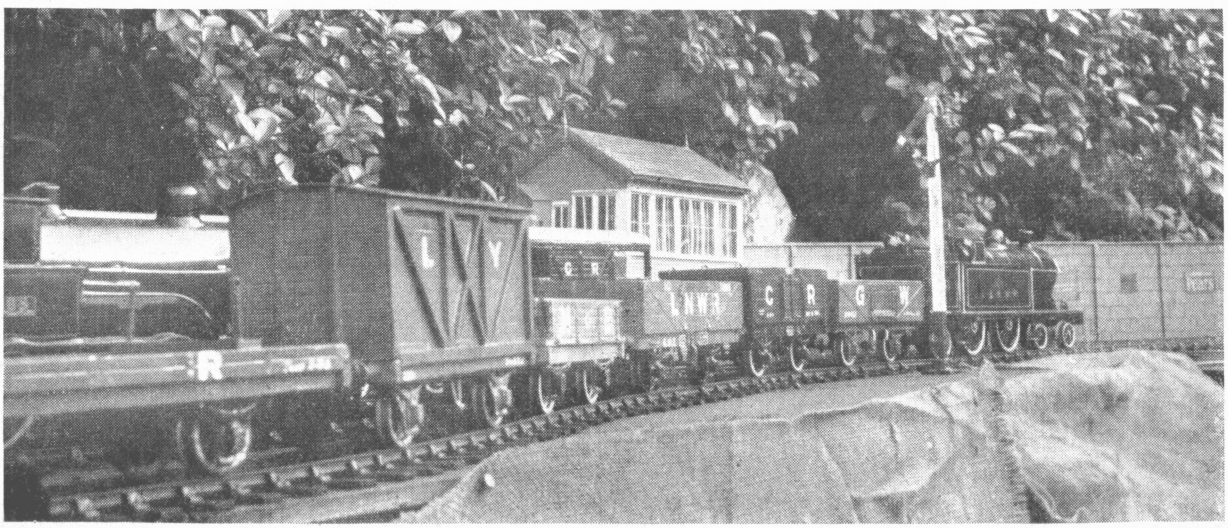
The Loco Stud

Locomotives at present in service include an L. & N.W. "George V" and two Precursor tanks, all spring-driven, and made by Bassett-Lowke. The Caledonian will be represented by four locomotives powered by steam: three, 4-6-0 No. 957, 4-6-0 *Barochan* and an 0-6-0 outside cylinder tank, are under construction and the fourth is an ex-B.-L. L. & S.W. 4-6-0 and is being rebuilt. A Midland compound, No. 1002, completes the stud, and this is awaiting steam trials following an overhaul.

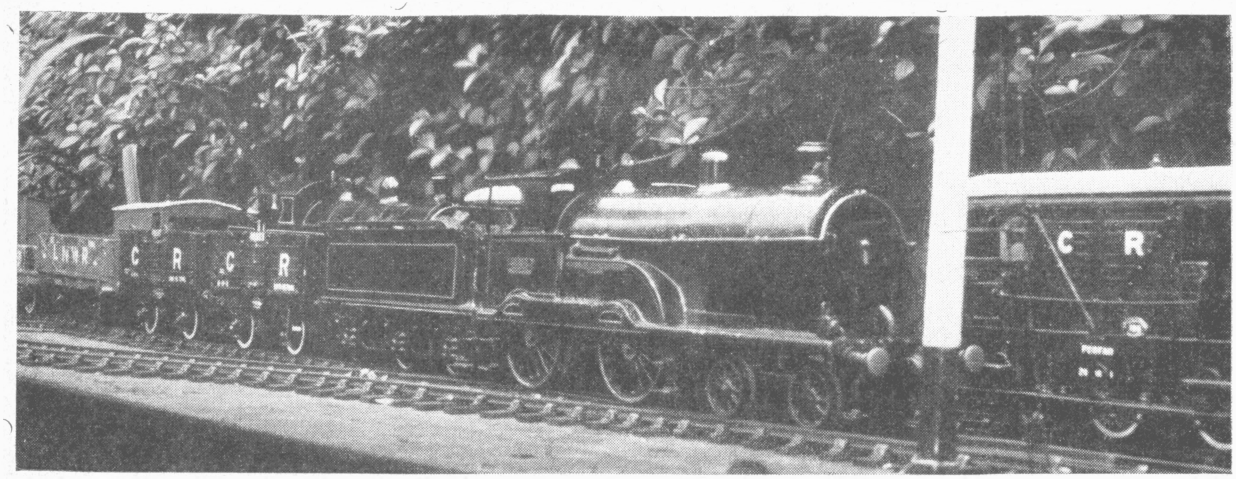
A large quantity of freight stock is envisaged with the accent on Caledonian 16-ton open mineral wagons, examples of which may be seen in the accompanying illustrations, and L. & N.W. 10-ton open wagons. An occasional box wagon will be built. North British and Midland freight stock is planned for later. The wagons and brake van were constructed and painted by Mr. W. Merrills of Derby and he has also undertaken the overhaul of existing locomotives and lineside equipment. Despite the fact that Mr. Merrills, an ex-Coldstream Guards N.C.O., is confined to his bedroom the standards he has achieved are truly remarkable. To quote Dr. Stilley, "The old pre-grouping stock comes to life in his hands."



Locomotive No. 44 shunting at Gretna Junction, a L.N.W.R. goods depot



L.N.W.R. Precursor tank heads a line of mixed freight stock out of Gretna Junction



The exchange point between Caledonian and London & North Western Railways. L.N.W.R. No. 826 "India" takes over a goods train from the Caley; the detached 6-wheeled brake van can be seen in the foreground

Some Bassett-Lowke tinplate coaches are being overhauled and partly rebuilt to include glazed windows and mansell wheels. In addition to these it is intended to have passenger stock of W.C.J.S., Caledonian and L. & N.W. design.

Research has been made into the Caledonian and North Western practice of displaying posters on stations and the two companies' style of lettering on station signs, as Dr. Stilley considers that a great deal of atmosphere is lost on otherwise admirable layouts by overlooking these matters. Authentic photographic copies of posters are to be used.

The line is constructed in two gardens, running powers into a neighbour's territory having been obtained.

A Coastal Vessel in 4 mm. Scale

(*Continued from page 111*)

the glue dried. If placed in the proper positions, these tacks can be hidden afterwards by the rubbing-piece. The third piece of card was fashioned around the stern as accurately as possible, and other pieces of card worked-in to get a reasonably smooth surface. Later the cracks were filled in with glue, and then the whole hull was shellac varnished and sand-papered twice.

I might mention here that shellac varnish was used throughout the construction as it not only makes it damp-proof but also strengthens it. It also gives a much better painting surface when lightly sand-papered. For gluing purposes I generally used either balsa cement or transparent cement, especially the latter when one of the parts to be stuck was metal. Acrabond was employed to stick the card pieces to the hull.

Having progressed so far, the next step was to make the bridge, wheelhouse, aft-deck superstructure, funnel, lifeboats (carved from wood), davits (formed from cycle spokes), hatches and ladders. I bought the ventilators, as I found it very difficult to make these satisfactorily. Luckily I had on hand some card tube which was used for the funnel. The galley chimney was made up from thin wood dowel.

Being an old ship, she has steam winches and windlass, and these appeared to be very tricky things to construct. It was not until I saw Mr. Bolton's other article in the MODEL RAILWAY NEWS for March 1944, that I began to understand. When in position they certainly add more realism to the vessel. The anchor chain is of copper and the anchors themselves are adaptations of lead castings.

The masts and derricks, originally $\frac{3}{16}$ in. and $\frac{1}{8}$ in. dowel respectively, required a fair amount of sand-papering to get them to the right taper. The "rigging up" was done with strong black cotton, the sheaves being made from pieces of red fibre disc cut out with a leather punch. Deck rails on the fo'c'sle were built up with pins and cotton which was afterwards shellac varnished, and $\frac{1}{16}$ in. squared strip-wood was used for the handrails. Navigation lights were not omitted, nor the "Red Duster."

The hull and deck machinery are black, the inside of the bulwarks red oxide and the deck superstructures are mid-brown. The masts, etc., are medium stone colour, which looks much better than white for this type of ship. The two narrow bands on the funnel are red and the broad band is blue. The letters "S.L." stand for "Seaways Ltd." These and the letters forming the name are waterslide transfers.

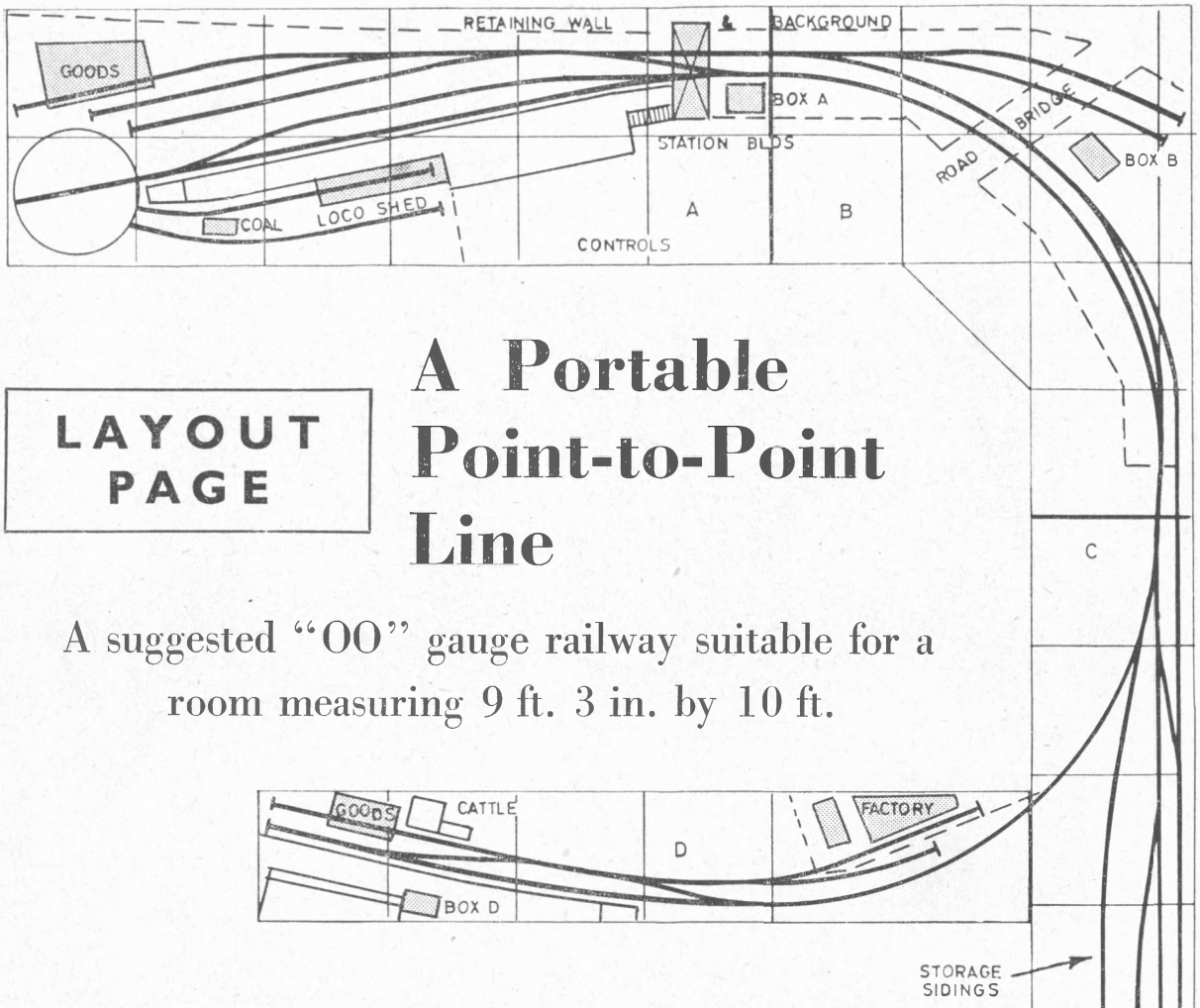
The *Beaver* is a very small ship, but, even so, she looks large enough when used in conjunction with "OO" gauge rolling stock. She has a very dignified look about her, especially when moored near her modern counterpart *Campfield*.

It did not cost very much to make the model and I found it very interesting to build. The drawings, I think, are self explanatory and hope that they may be of use to interested readers.

● *Our Cover Pictures*

Readers of *MODEL RAILWAY NEWS* are invited to submit for consideration photographs which may be suitable for cover pictures. Reference to the covers of recent issues of M.R.N. will give an indication of the type of photograph preferred. If accepted, a reproduction fee of two guineas will be paid on publication.

Prints should be addressed to **The Managing Editor MODEL RAILWAY NEWS 19-20 Noel Street, London, W.1.**



LAYOUT PAGE

A Portable Point-to-Point Line

A suggested "OO" gauge railway suitable for a room measuring 9 ft. 3 in. by 10 ft.

THIS is a plan of a reader's first layout, at present in the course of construction; it is designed primarily for portability so that it may be erected in the largest room available. From the operational point of view the following factors were considered desirable:

(1) A point-to-point system, so that additional sections may be added compatible with the space available for extensions and/or variations.

(2) Operational possibilities, marshalling, shunting and time-table operation.

(3) Main terminal, with reasonable platform length, rather than a number of short bays. Storage siding and a branch line with small country station, and factory for traffic origination.

(4) A level layout, with the introduction of depth and variations in levels by manipulation and placing of buildings, scenery and background.

(5) Minimum radius of 36 in., on all main-line sections, and whenever possible in sidings, branch lines, etc., so that all types (classes) of locomotives and rolling stock may be used.

(6) Simple trackwork, all crossovers and turnouts available in commercial form.

Section A represents a terminal station situated in a growing industrial centre, some 20 ft. below the level of the roadway. Entrance and exit is effected by means of an over-bridge with the usual booking facilities and accommodation. Also situated on this section are the motive-power depot, goods shed and yard, and the switchboard controls for operation.

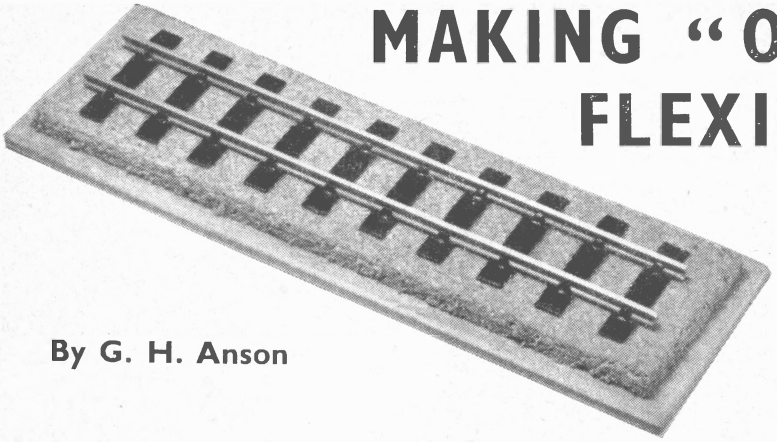
Section B provides the railway approach, with a run round and exit from the goods yard.

Section C provides ample storage accommodation for fairly extensive time-table operation, with a branch line leading to Section D with a small country station and factory.

Each square on the drawing represents 1 sq. ft. on this 4-mm. scale layout.

Design by
J. H. Jennings

MAKING "OOO" GAUGE FLEXIBLE TRACK



By G. H. Anson

THE joy and sometimes the pain of railway modelling is the sure knowledge that no sooner is one problem solved to one's satisfaction, than another rears its head. So, having made a "OOO" gauge locomotive that worked, the problem became—"what about track?"

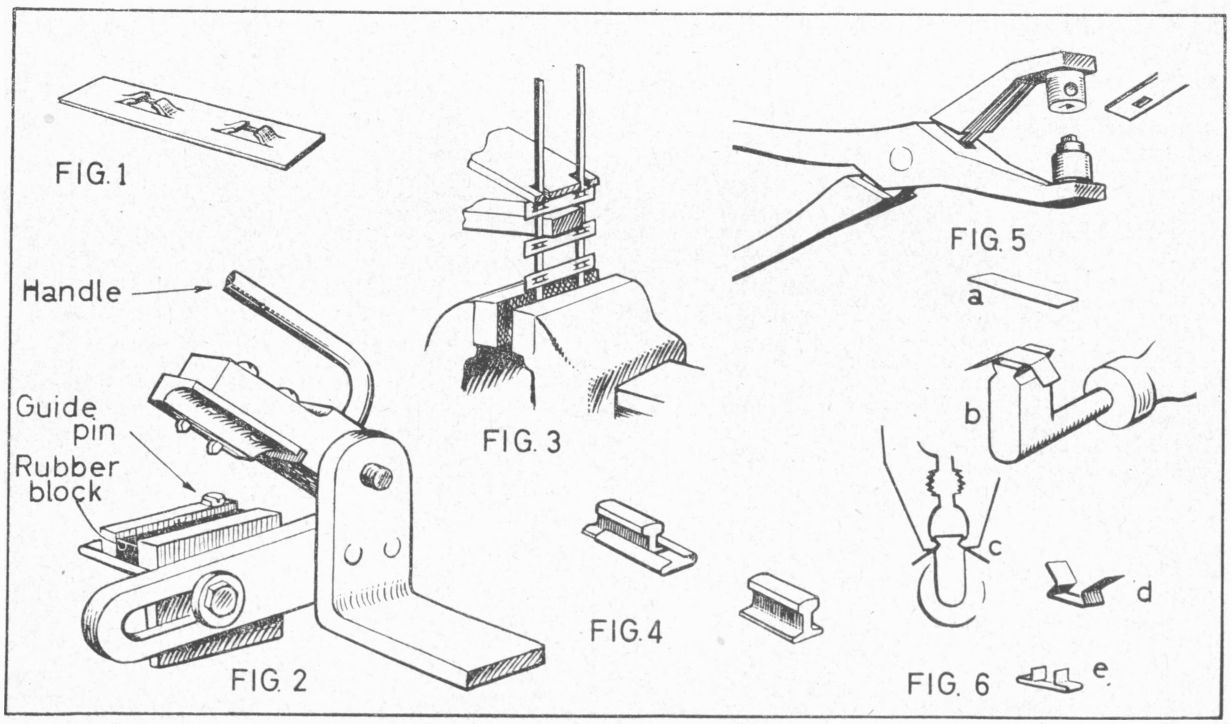
Peco supply very good "OOO" flat bottom nickel-silver rail and this is the basis of my track, but I baulked at the thought of soldering this down to pin heads pushed into the track-base. Separate chairs and sleepers in so small a size were not a practical proposition, so I tried to combine the two (Fig. 1). The problem was the choice of material. I could not use metal, as I wanted a two-rail system, so I tried vulcanised fibre, very thin sheet Tufnol, and even very thin, tough card, but all were unsatisfactory, for when cut and raised from sleeper level the very small chairs were either too soft and lacking in grip, or snapped off.

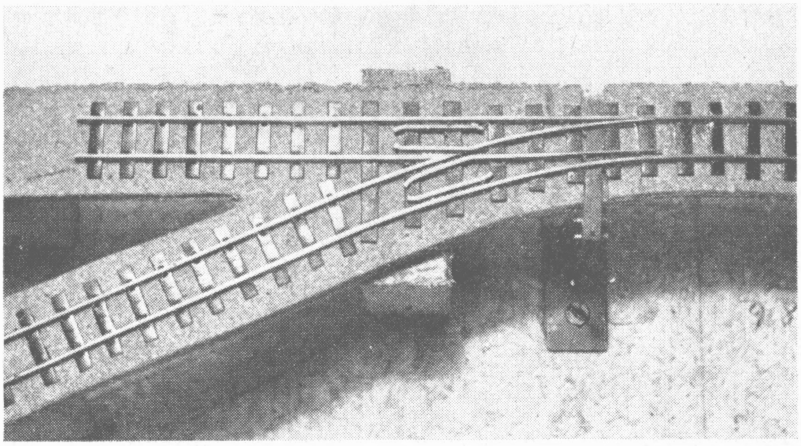
After a few evenings of this unprofitable pastime, I chanced to pick up a roll of sheet celluloid, the type used for car side screens. It was about the right thickness and very springy, so more in desperation than with any real hope, I tried it and found it extremely tough, but easy to cut. Having intended from the beginning that the chairs would be punched accurately to ensure easy and correct gauging, I next constructed a simple press tool of bits from the scrap box. This had to punch the chairs, raise them and crop the sleeper the correct width from a strip of celluloid fed into it, as will be seen from Fig. 2. This was done in one operation by mounting the two steel piercing and raising points on a base the width of the sleeper, which in turn was hinged over a hard rubber bolster, confined each side by a strip of steel which formed the other half of the cropping edges.

After considerable trial and error with different types of rubber, I found strips of tap washer ideal. It was hard enough to stand up to the punch, and form the chairs properly, but resilient enough to keep coming up for more. In practice, about 150 sleepers were made before the rubber showed signs of giving up the struggle. Then, of course, it was replaced in a matter of moments. I added a guide-pin, as shown, so that the strip was punched in the same place each time.

I have no doubt that a very much better tool could be made, with a properly mounted punch which moved straight up and down, and had properly hardened faces, but until the present one shows signs of giving up, I shall not bother. I have made 500 sleepers with it so far, and it is still going strong.

The celluloid was prepared by cutting it into $\frac{3}{4}$ in. wide strips about a foot long. One side was roughened all over with fairly coarse glass-paper and painted with black cellulose—this gives a fairly rough surface.





An 8 mm. gauge turnout on elevated track

The sections of track are assembled by placing the two lengths of rail vertically in the vice, the correct distance apart, and sliding the sleepers on one at a time. They are pushed down with a small piece of wood, shaped as shown in Fig. 3 and a distance-piece held between each one in turn, to ensure even spacing. To ease the fitting of the sleepers, slightly taper and point one end of each rail. When a section of rail is complete, it is stuck to the cork ballast sheeting on the baseboard. Each sleeper is quickly smeared underneath with balsa cement; the section is placed in position and held down firmly for about an hour by placing strips of ply or other board on top of the rails and weighting down. When properly glued and hard, the resulting track is very strong, and the use of this unlikely material, I feel, is amply justified. For curved sections, I have found it easier to form the two pieces of rail to near the desired curve before adding sleepers. The track will then flex easily to the exact curve. Rail ends are held in line by bending thin strips of brass, as shown in Fig. 4.

I expect one of the first things that will be questioned is what happens when heat is applied to solder the bonding wires? In my experience, so long as the rail ends are tinned before the sleepers are added, the very brief application of heat then required does not melt the celluloid at all.

Point construction called for second thoughts about celluloid timbers. More soldering and extra strength to take movement of the blades were involved, so I chose thin vulcanised fibre.

The frog rails were first shaped over the point-plan and soldered together; then the outside rails shaped and held to the others by adding several sleepers to each end to keep them gauged. Next a strip of red fibre was laid in the appropriate place under the rails and scribed lines made on the fibre each side of each rail. It was removed, and punched with the square punch tool (Fig. 5), between the scribed lines. The thin sheet brass chairs were made as shown in Fig. 6. One of these was then pushed through the square hole from underneath, past each side of the rail. The rail being held firmly into the timber, the chair tabs were closed on to the rail. The two were then soldered together. If a minimum of solder is used and the brass is painted, the effect of chairs is quite good. This process is completed on all timbers in turn.

Electrical Fault-Finding Made Easy

By Alan M. Snowdon

MOST "OO" gauge 2-rail modellers have trouble with points, one major headache being to ensure that the blade makes good electrical contact with the stock rail when it should; and that at other times the backs of metal wheels clear the blade as they run through the gap. For no more than the price of a "packet of 20" you can make something to overcome this.

Fig. 1 shows a circuit consisting of a battery, a buzzer and two long leads terminated in crocodile clips. Any ex-government shop can supply these parts. Of course, both buzzer and battery should be of compatible voltage. Put the buzzer and the battery in a wooden box or mount on a piece of wood and wire as shown. Best solder on the leads to the battery—my first battery lasted three years!

Having constructed the point and its method of operation (lever, wire or motor) fix one "croc" clip to stock rail *A* and one to frog *B* (Fig. 2). With the type of point shown, if blades and stock rail are making good contact, you should now have a nice healthy buzz. Open and shut the point a few times and see if you have joy each time. The contact on the opposite side can then be checked in the same way by removing the clip from *A* to *C*.

You will be surprised how many weaknesses this little device will show. It can be used for checking fishplate joints and identifying any particular wire from a bundle. The technique of this latter, is simply to attach one clip to one end of a particular wire. Now touch the other clip on the opposite end of each wire until—BUZZ—that's it!

Note that a buzzer is preferable to a lamp, as your eyes cancon centrate on the job in hand while you listen for the buzz. Further, if "croc" clips are too big to reach inside awkward places, they can be attached to a screwdriver shank and that can be used as a probe.

Another useful gadget is a miniature Edison screw (M.E.S.) lampholder on two "legs" which can be opened to straddle the track. When equipped with a suitable 12-volt bulb it is the equivalent of a voltmeter, at a fraction of the cost. Thus, when your loco refuses to move, you can lift her off and instantly prove that either the brute simply won't go or somehow the juice isn't reaching her. Further investigation with the buzzer or lamp will usually find the cause. Trouble is—nobody makes this lampholder now—or at least you cannot buy it in the chain stores any longer. Enterprising manufacturers, please note!

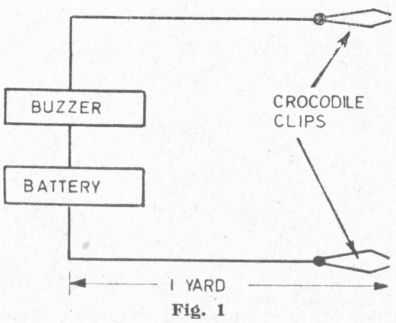


Fig. 1

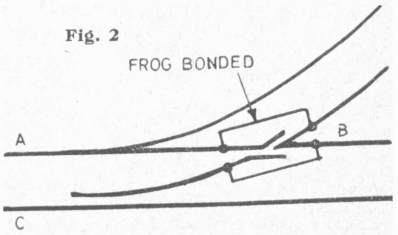
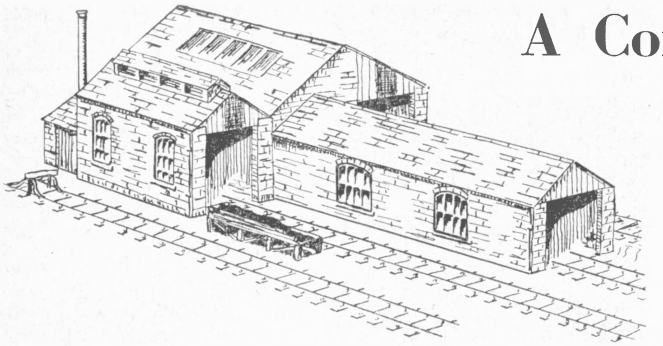


Fig. 2



A Combined Locomotive, Carriage and Wagon Depot

By G. P. Overton

THE average modeller with his usually limited space seems to have little or no place for proper locomotive, wagon and carriage repair services. To have separate depots for each of these is a luxury in space which few of us can afford. Therefore, it is with advantage that a combined depot may be used.

The works that I am describing is based on that at Towyn (Pendre) on the Talyllyn Railway. The design has been adapted so that it may be more easily modelled and better in keeping with standard gauge rolling stock.

Cardboard is, without a doubt, the best medium for the construction of these buildings. For the walls I would recommend cardboard about $\frac{1}{16}$ in. thick and these are best made in one piece, as shown in the drawings. After cutting out the sides, corners are scored on the outside to allow for a clean bend. The corners are next strengthened with $\frac{1}{4}$ in. square wood, balsa or obeche will do quite well, as they can be worked easily. Now put strips of wood along the top and bottom of the sides so that they form a frame by joining the corner strips. Further strips of wood may now be put in the ends to complete the frames. The corners should be covered with brown paper parcel tape, which gives added strength, and can be made to give a sharper corner by folding it before fixing.

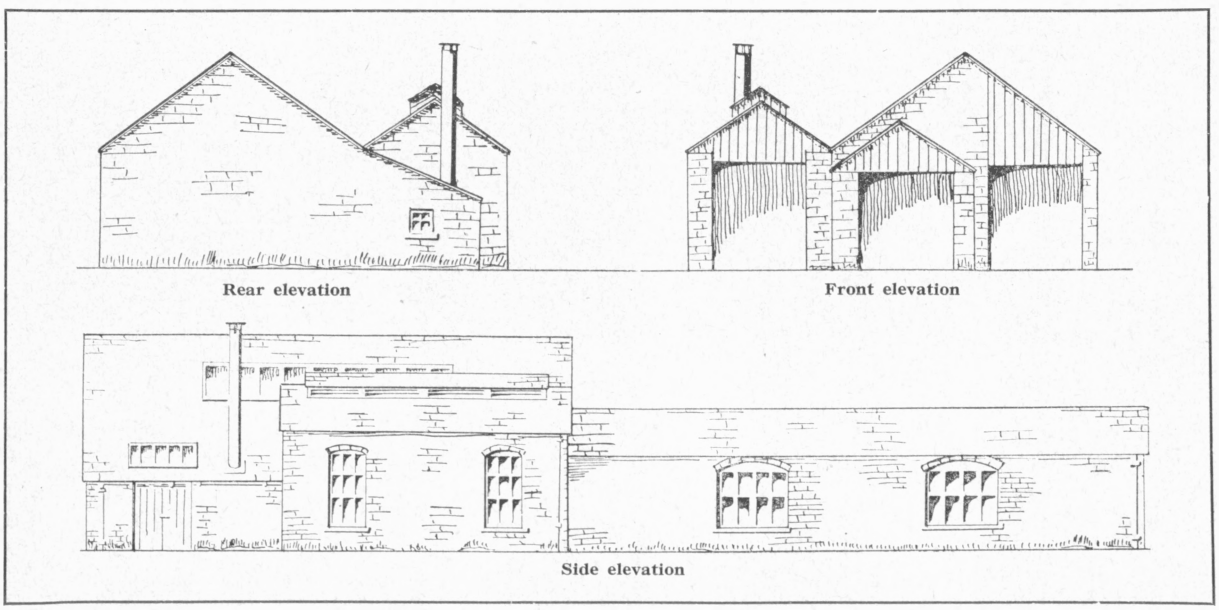
Next we have the false roof made of $\frac{1}{16}$ in. thick card. This should be made to fit inside the walls, and may be strengthened with parcel tape. The skylights should be cut a little larger in the false roof so that the thickness of the inner layer of card will not show. The glazing of the skylights may be put between the false roof and the roof proper, this will make the job stronger, but it is more correct to put it on top of the tile paper. The roof is made from card of 1/32 in. thickness and should overlap the walls by about $\frac{1}{8}$ in. all round. When the three buildings are glued together the surplus overhang can be removed where necessary.

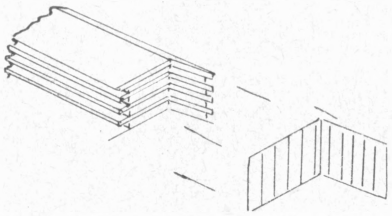
The boilerhouse chimney can be made from $\frac{1}{4}$ in. dowelling, a small drawing pin for the cap and three small pieces of card glued to the top of the dowel. A small roof plate should be fixed to the bottom of the chimney after the tile paper has been mounted.

The clerestory on the locomotive shed will be made of layers of card, alternate layers being cut $\frac{1}{8}$ in. smaller than the others to give the impression of ventilating louvres. It is best to paint the inside of the louvres black before sticking the clerestory to the roof. The sides of the clerestory are finished by adding vertical strips of card to represent the louvre frames, and the end is another piece of card with the vertical planks scored upon it.

The window frames are the next to be made. They are cut from thin card to a size just a little smaller than the window opening, and when this is stuck on the inside of the wall it represents the outside frame of the window. The inside frames are made from thin strips of paper stuck on with balsa cement.

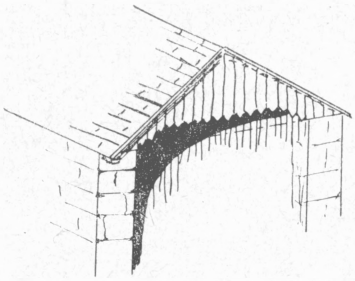
Building papers are now required. Almost any *old* finish will do, although personally I would use Merco old



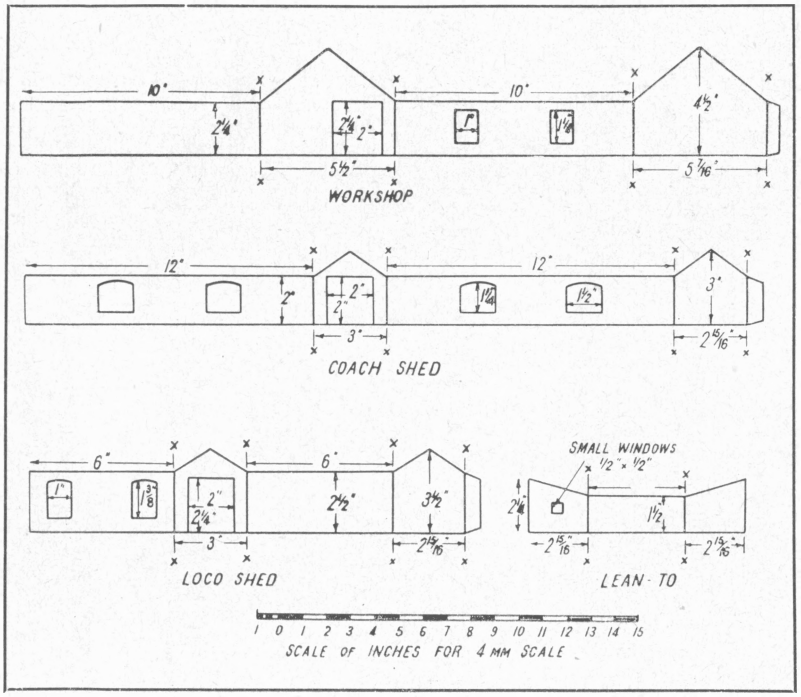


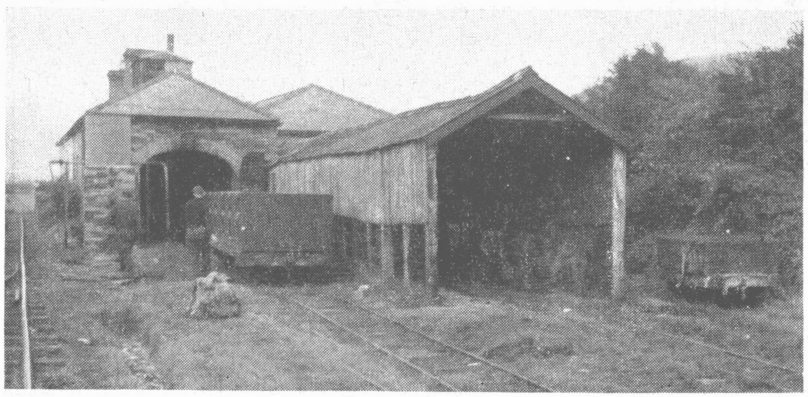
Showing the construction of the loco shed clerestory

Left: Details of the chimney top



Sketch of the higher doorway to coach shed





The locomotive and carriage shed at Pendre on the Talyllyn Railway. Photographed by J. J. Davis

stone for the workshop and carriage shed and weathered brick for the locomotive shed. The roofs of all the buildings are best covered with slate paper. The lean-to on the side of the workshop could be covered with a third type of brickwork, Merco old red brick would do nicely. All woodwork over the doorways should be painted deep cream; the door of the boilerhouse and window frames should be light brown (G.W. brown with some white added).

The doorways are rather on the low side. This has been done so that the buildings will not look too high; an ever present problem with short buildings. If you are using scale track, there will be plenty of headroom in the locomotive shed and workshop, but only sufficient room in the coach shed for old low-roof coaches. It is therefore suggested that the doorway should be enlarged, as shown in the drawing, if modern coaches are to be used. Should the builder be using proprietary makes of track, he will have to make his walls higher, $\frac{1}{8}$ in. for Wrenn; $\frac{1}{4}$ in. for Hornby Dublo; and $\frac{1}{2}$ in. for Trix and Tri-ang.

To facilitate track maintenance within the area of the buildings, it is best not to make them permanent fixtures. Glue small blocks of wood to the baseboard to act as location points and to prevent lateral movement.

For the finishing touches, add as much old junk as you can lay your hands upon. Old wheels, chains, cylinders, etc.

Revival of old-style G.W.R. Signal painting

There are still several specimens of the old Great Western pre-grouping signals to be seen at various places, and during January and February, in that freezing weather, some of these were completely repainted, posts and all.

The *really* intriguing point about the 1956 repaints is that the good *old* G.W.R. style of painting has *come back* !

At least since the time of the grouping in 1923, G.W.R. signals have been painted with an all-red (yellow for Distants) front face, relieved merely by the white stripe (black chevron for Distants). The finials have been painted with white spike, pedestal and base, and a red or yellow ball. In the 1956 repaints, the arm is red or yellow as before, but the rectangular casting at the rear end, to which the spectacle frames are fixed, is painted black; the finials now have a white spike, red or yellow ball, white pedestal and *black* base. This applies to old G.W.R. signals still existing between Taplow and West Drayton.

There has been no change in the style of painting the modern all-metal arms and posts, except that the latter are not painted white but aluminium.

EDITOR'S MAILBAG

Letters of general interest are welcomed. A nom-de-plume may be used if desired, but the name and address of the sender must accompany the letter. The Editor does not accept responsibility for the views expressed by correspondents.

THANKS FOR "BITS AND PIECES"

DEAR SIR,—May I take this opportunity of thanking once again all those railway modellers who responded so generously to the appeal in the December 1955 issue. The response was very gratifying and I would like to tender a sincere "thank you" to everyone for parcels, etc., especially the anonymous contributors whom I have been unable to thank by letter.

Yours faithfully,

Basford Hall Special School, Nr. Leek, Staffs. J. R. BRINDLEY.

"OOO" GAUGE

DEAR SIR,—It is interesting to note that there are at least three track gauges for 2 mm. scale. The MODEL RAILWAY NEWS for January 1956 mentions 8 mm. while the September 1949 issue shows it as 9.5 mm. The third figure is given in the newly published book by E. F. Carter, "Modelling in OOO Gauge." It is unfortunate that this book contains a number of errors and ambiguities, among which the gauge is given on page 29 as 9.5 mm., and in table 4 at the end of the book it is shown as 9 mm.

Perhaps people who have already produced 2 mm. scale models might be persuaded to state their standards. If they have any hopes of the popularity of this scale developing it will be in their interests to do so. Personally I feel that 9 mm. is possibly the most satisfactory gauge for 2 mm. scale for similar reasons to those set out for E.M. gauge in your editorial of November 1955.

To refer again to Mr. Carter's new book, he quite rightly states that the production of an electric motor in this scale is no easy task This task can be made much easier when producing models of certain larger types of tank engine. Sufficient space will be found inside the tanks to accommodate standard 4 mm. scale armature stampings and commutator.

Yours faithfully,

Dorking, Surrey. G. P. MIDDLETON.

"OO" GAUGE MECHANISMS

DEAR SIR,—The letters recently appearing in "ours" about "OO" mechanisms have rather touched me on a tender spot.

What on earth do model railway enthusiasts do to their mechanisms to get them into such states of gross inefficiency? In the I.W. Model Engineering Society, we have several mechanisms which not only come up to the so-called "standard" of nine bogie coaches, but which can easily pass it. Leaving other folk to speak for themselves, and omitting five and seven-pole motors, can I quote details of an ordinary locomotive in my own stud?

A 4 mm. scale L.B. & S.C. I.3 (4-4-2 tank), fitted with a Romford 3-pole mechanism, 30-1 gearing and 26 mm. wheels, can get away with 60 axles (equal to 15 bogies), starting on a curve. The best test this locomotive has passed is probably a run at one of our exhibitions. During this run a mixed load, mostly heavy wooden stock of 44 axles, was hauled. As the main circuit on the track includes a 1 in 30 climb about 7 ft. long with only 2 ft. of straight at the foot, it was a clean pull. Usual disclaimer of interest in Romford mechanisms, particularly as this one is now over five years' old, well used, and can at the moment of writing pull four wooden bogie coaches up a 1 in 13 incline from a standing start.

Yours faithfully,

Newport, I.W. H. A. SPANNER.

OLD ROLLING STOCK

DEAR SIR,—In these days of increasing standardisation, there seems to be the natural reaction to regard railways with a mounting interest the further one probes back into their past histories. Consequently, when one finds something unusual and a relic of times that could provide so much variation of any one type of rolling stock, one is immediately curious to know its origin and history.

About a couple of years ago I photographed a vehicle inside a transit wharf shed on the west side of King's Dock, Swansea. It was being used at the time as a clerks' office and no doubt is still fulfilling the same function.

I am rather puzzled as to where it originated; from an article on the Mumbles Railway in an early volume of *The Railway Magazine* (1905 or 6) there seems to be no help. The stock in those years, as now, seems to be all covered by the appellation of "glorified tramcars."

The photograph of this vehicle reproduced herewith may help a reader of MODEL RAILWAY NEWS to identify it.

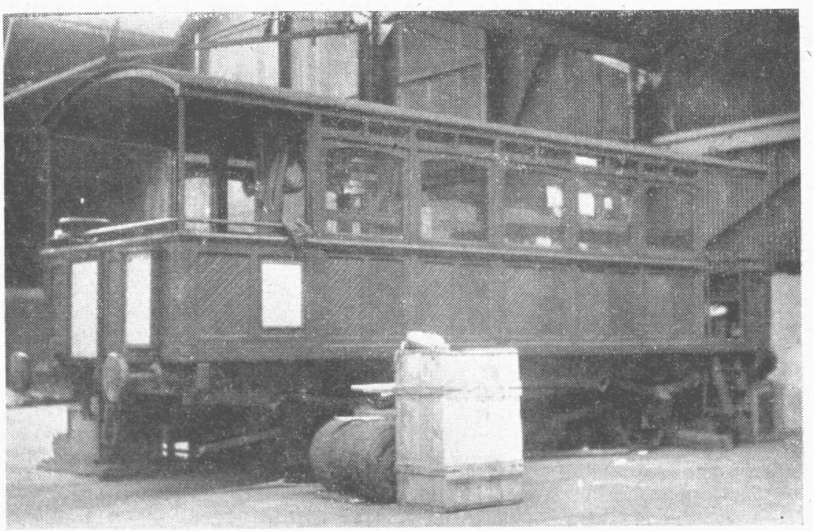
The pitch of the roof, it will be noticed, is more that of a goods brake van, though it was obviously a passenger vehicle when last used in running. There are wheel hand brakes at each end, whilst the oddest clue is the word Gorton on each axle box! Is it a product of the Great Central carriage works, I wonder? If so, where was it first intended to operate?

Also, it should prove of interest to those engaged in modelling light railways, apart from its historical aspect.

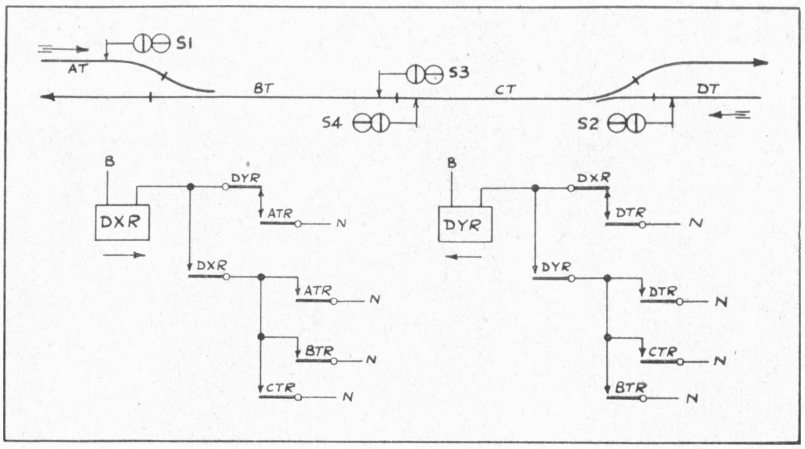
I have been a reader of MODEL RAILWAY NEWS since 1936 and have thoroughly enjoyed the good standard of production, which is maintained. Of particular value are the articles of practical experience in all forms of railway modelling, together with drawings and photographs of prototypes.

Yours faithfully,

Bristol. B. HILL.



What is it?



CORRECTION — HOW TO WIRE AUTO-SIGNALS

DEAR SIR,—I have discovered that a serious error occurred in the second article in this series, published in the February issue of MODEL RAILWAY NEWS. Due to circumstances beyond my control, I was unable to make the correction before it went to press, and I can only hope that I have not caused too much confusion by my mistake.

Referring to my circuit for single-line working (Fig. 4) the arrangement shown will only work in one direction and then not very well.

The circuit shown here is far better in all respects and it will be noted that two direction relays (DXR, DYR) are used, one for each direction of running. The two relays are interlocked so that two trains cannot be accepted at once; signals S2 and S4 being held at danger by relay DXR energised and signals S1 and S3 by DYR energised.

Both this arrangement and that shown previously pre-suppose that the points at each end of the single line are spring worked and, therefore, do not affect the circuits.

Yours faithfully,
Chippenham. R. T. HUTT.

DEAR SIR,—If one so young both in years and in the hobby might be permitted, I would like to correct Mr. Hutt's diagram of a four-aspect colour light signal ("How to Wire Auto-signals," January 1956). Working as I do on the Southern at Purley, I am afforded a first class opportunity of studying this fascinating system and I am thus able to assure Mr. Hutt that on the Southern at least, the four aspect signal is:

not this	but this
G	Y
Y	G
R	Y
Y	R

I might add that I intend to commence work on a fine scale 18 mm. gauge layout modelled on the prototype of the "Brighton line."

Yours faithfully,
Cheam. JOHN W. CAPON.

THE MODEL RAILWAY CLUB EXHIBITION

DEAR SIR,—Our attention has been drawn to the advertisement by Messrs. Taylor & McKenna appearing on page iii of the March edition of the MODEL RAILWAY NEWS.

This advertisement states, *inter alia*, that the invitation to that firm to exhibit at the Model Railway Exhibition was withdrawn "after our refusal to accept a stand smaller than last year's."

This statement is inaccurate. The space allotted to that firm at the previous exhibition had a total area of 78.75 sq. ft., with a frontage of 8·ft. 6 in. The space offered at this year's exhibition had an area of 81 sq. ft., with a frontage of 9 ft.

The offer of space was withdrawn under circumstances with which we need not trouble you, but we do feel bound to ask you to correct the inaccurate and damaging statement which, no doubt in ignorance, you published and to give that correction the same publicity which you gave to the original false statement. Yours faithfully,
London, S.E.25. J. R. ANNING.
Chairman,
The Model Railway Club Limited.

SIGNALLING

DEAR SIR,—While reading with much interest Mr. John L. Ray's article entitled "M.I.C. in 'O' Gauge" in the March issue, my attention was attracted to the question put by John Blair during the signalling quiz because the "impossible position" for which I imagine he was asking is not, perhaps, so impossible as Mr. Blair may think and I shall, if I may, tell you why.

One afternoon prior to the war, while living on the former L. & N.W.R. branch from Birmingham to Sutton Coldfield, I was returning from lunch at home (oh, happy days !) to my office in Birmingham when the train pulled up at an unusual spot (there were others where one was more surprised if it didn't stop than if it did !) where I knew stood this—(see sketch *A*).

Knowing that it was some time since the previous train had passed that way and that the next "home" was at a junction, I was filled with curiosity as to why we had not been permitted to proceed to the junction. Consequently by head went out of the near side window and what met my astonished gaze, believe it or not, but this—(see sketch *B*).

Improbable ? Yes. Irregular ? Certainly. But impossible ?

I would that I had a pictorial record to send you but alas my camera was not with me !

Yours faithfully,
Moseley. H. P. NEEDHAM.

Controversial Cover

During the past few weeks we have received considerable correspondence on the subject of last month's cover. The general opinion is that the photograph was taken at Waterloo, but this is by no means unanimous. We publish here a few of the details of some letters.

"According to the head code, the train could be Victoria to Dover Marine or Waterloo to Plymouth . . . my bet is Waterloo. . . ."
J. W. BURMAN. . . Fife.

"It is a Nine Elms engine with No. 5 on the front, so presumably it is an afternoon train to West Country, at Waterloo."
C. J. DURRANT. . . West Wickham.

"The head code in the photograph can, of course, be used if the train is leaving Victoria for Dover Marine and travelling *via* Swanley, and I am inclined to think that *this* train is leaving Victoria. . . ."
S. A. G. TINGLEY . . . Tonbridge.

"From what little can be seen of the station, it would appear to be Waterloo, in which case the train, according to head code, is bound for Plymouth."
R. DOBSON . . . Margate.

"Instead of an up boat train at Dover Marine, I reckon it is a down West of England express at Waterloo."
D. CURTIS . . . Feltham.

THERE were very few new trade items to be seen at the Model Railway Club Exhibition this year, but this did not prevent the visiting public making good use of the exhibition to catch up on its purchases. We gathered that traders had a good week and feel justifiably convinced that they are on the right lines.

Among those items that were making their debut we rather liked CCW's foreign passenger stock and in particular the " Santa Fe " coach with neat cast end rails, steps, etc., all in the kit. HAMBLING'S latest addition to the " Bilteezi " range of card parts caused favourable comment. Tunnel mouths are always in demand and these are the subject of the new card. They can be built with or without buttresses.

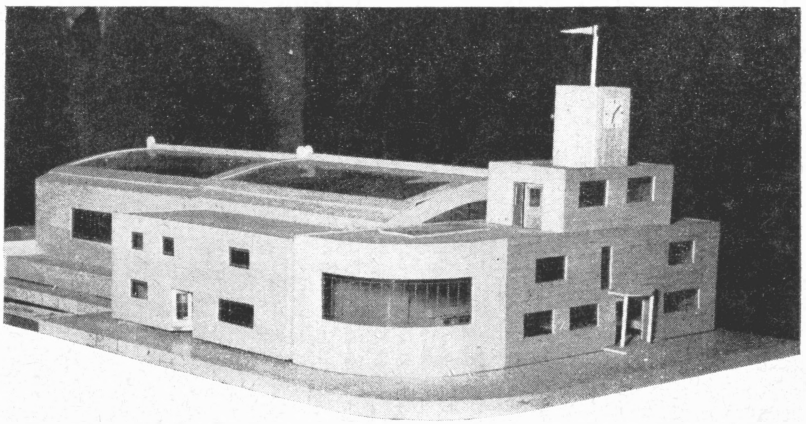
K's of Shepherds Bush surprised us with two kits of cast parts to make a plate glass truck and an open coal wagon, all metal variety. These kits are the forerunners of quite a series and are priced at 5s. 3d. each inclusive of turned buffers, cast axle guards and brake gear in the case of the wagon ; buffers are included in the truck kit, axle guards being cast on to the main frame. Both kits incorporate a commendable amount of detail and, selling at such a reasonable price, who can wonder at the fact that they were sold like the proverbial hot cakes ? Incidentally, should you experience a little delay in obtaining these items, not to worry ; somebody at Shepherds Bush will be sweating it out over casting machines to make good the deficiency in stock caused by their successful introduction at the exhibition.

Whilst on the subject of wagon kits we cannot pass over another range of quick sellers, namely the PECO Wonderful Salt Wagon kits. These are up to the standard of the private owner wagons already on the market and the apparently increasing numbers of devotees of the P.O. wagons of Britain's railways are being well and truly catered for. Price 7s. 6d.

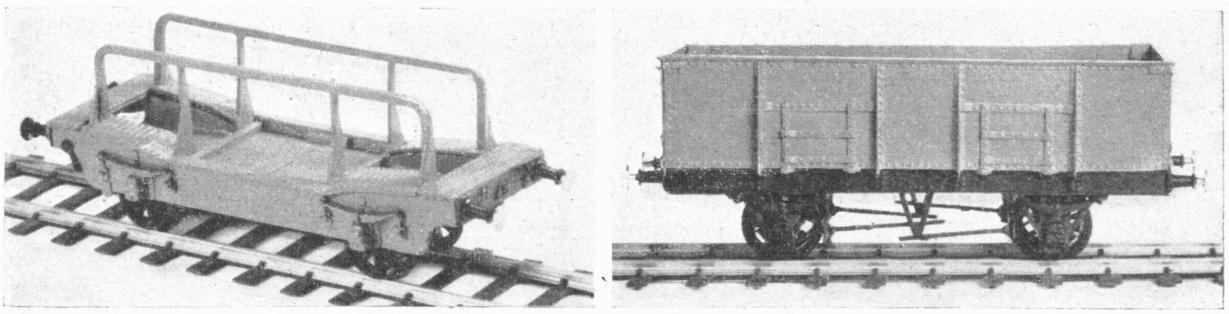
MODELCRAFT have produced a kit that makes up into a modern styled terminus or, alternatively, a covered through station. All the wooden parts are printed ready to be cut out, so no marking out is necessary. The acetate canopy and windows have all frames printed in white. An additional kit is on the market that makes a separate canopy for use with the main station or as you will. Prices are 16s. and 7s. Both kits include platforms and the overall measurements are 14 in. × 13 in. and 11 in. × 10 in. respectively. Here is a good base on which to build up a detailed terminus in the modern style.

The WRENN BROTHERS were showing three new items not quite ready for general sale, on their colourful stand. A two-rail universal double junction, some new " atmospheric " trees (we stipulate " atmospheric," because they are not intended to be models of trees, but merely to simulate them and in that capacity are really effective) and a new underlay that resembles granite chips. Prices for all these items are not available but we believe that they will be reasonable.

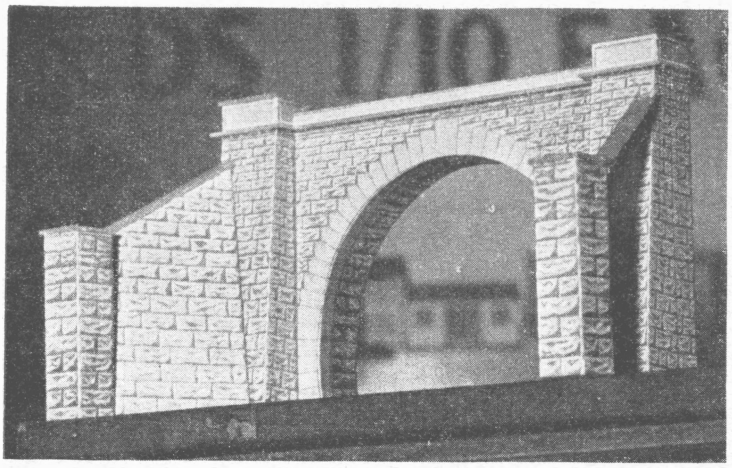
KIRDONS, although not present themselves, were represented by their equipment and one item in particular attracted our attention : a strip of polystyrene representing a stone wall. We understand that this new line is to be sold in packets of two strips, a generous 5 in. × 3 in. giving a total of 30 sq. in. in a packet for 1s. 6d. The polystyrene can be bent by gentle warming in water or over a soldering iron (care is required here) and also cut with tin snips after the warming treatment. A simulation of brick wall will also be available.



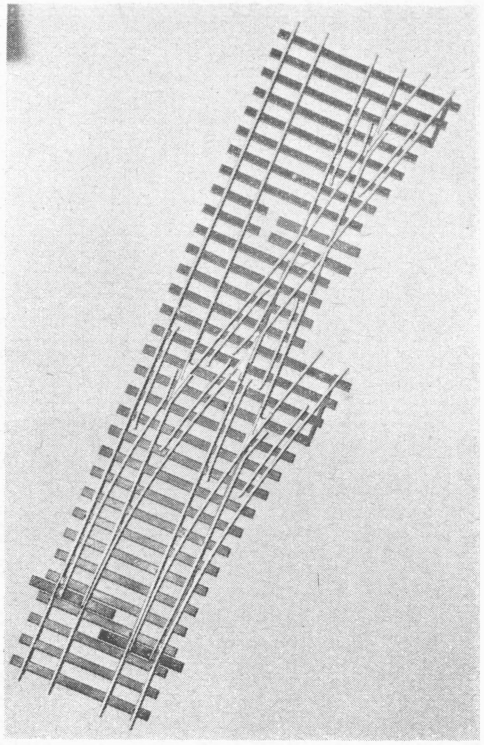
The combined kits making a total length of 2 ft. 1 in.



The first two of the new range of kits put on the market by K's of Shepherds Bush



Made up from Hamblings' latest Bilteezi card, No. B.6, and available at 1s. 10d.



Right: Messrs. G. & R. Wrenn will be putting this 2-rail double junction on the market very soon

WOLF ELECTRIC TOOLS LIMITED have informed us of another expansion within their organisation, consisting of the formation of a company in Australia with premises on the outskirts of Sydney.

Initially the factory will assemble components shipped from U.K., with plans for the eventual production of equipment in Australia.

* * *

HATTONS of 136, Smithdown Road, Liverpool, 15, have told us of the largest recent exchange that has taken place under their conversion service scheme. An "O" gauge layout valued at £350 was replaced by an "OO" gauge model railway, and it took precisely three days to complete the business. Large or small exchanges are all grist to the mill as far as Hattons are concerned, whether it is the model bought by a friend as a Christmas present or a complete change of outlook entailing a switch in period, gauge and method of electrification. There are conditions, of course, and Hattons will soon let you have these on request.

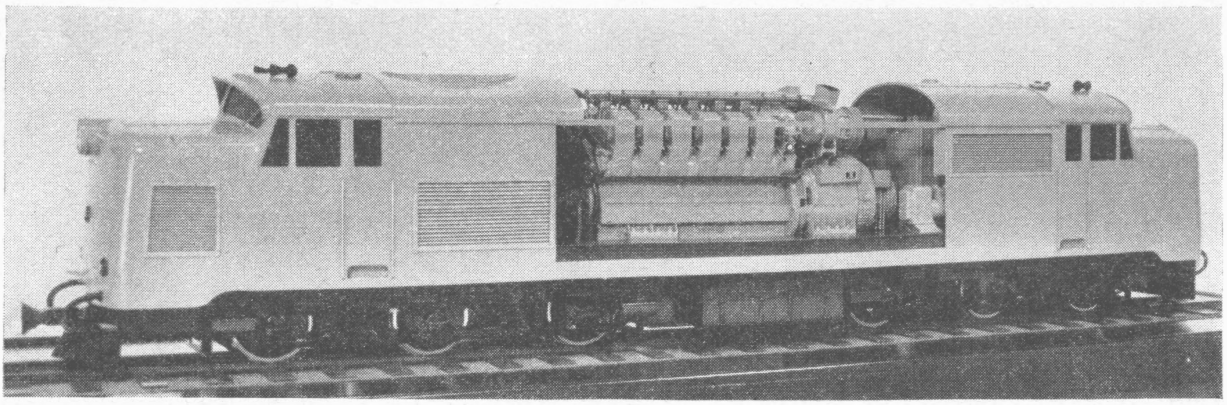
Scale Model Diesel Electric Locomotive

THE English Electric Co. Ltd. have received, through the Crown Agents, an order for the Malayan Railways covering 20 main-line 1,500 h.p. diesel-electric locomotives. The value of the contract is approximately £1½ million. The locomotives will haul express trains, up to 450 tons in weight, on the Singapore-Kuala Lumpur-Prai line. They will weigh 96 tons each and are of the Co-Co type, embodying the English Electric 12SVT diesel engine, which is rated at 1,500 h.p., 850 r.p.m.

The Malayan Railways are planning extensive improvements to their main-line services. The operating speed at the moment is limited to 45 m.p.h.; with the new locomotives a maximum of 60 m.p.h. will be possible.

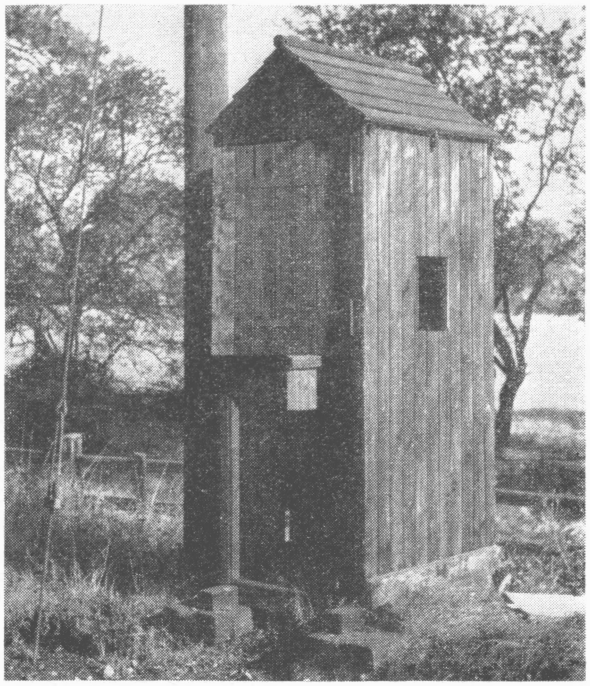
The picture shows a ½-in. scale model of the Malayan Railways 1,500 h.p. diesel electric locomotive made by Edward Exley & Co. of Bradford.

Photograph by Leslie Overend.

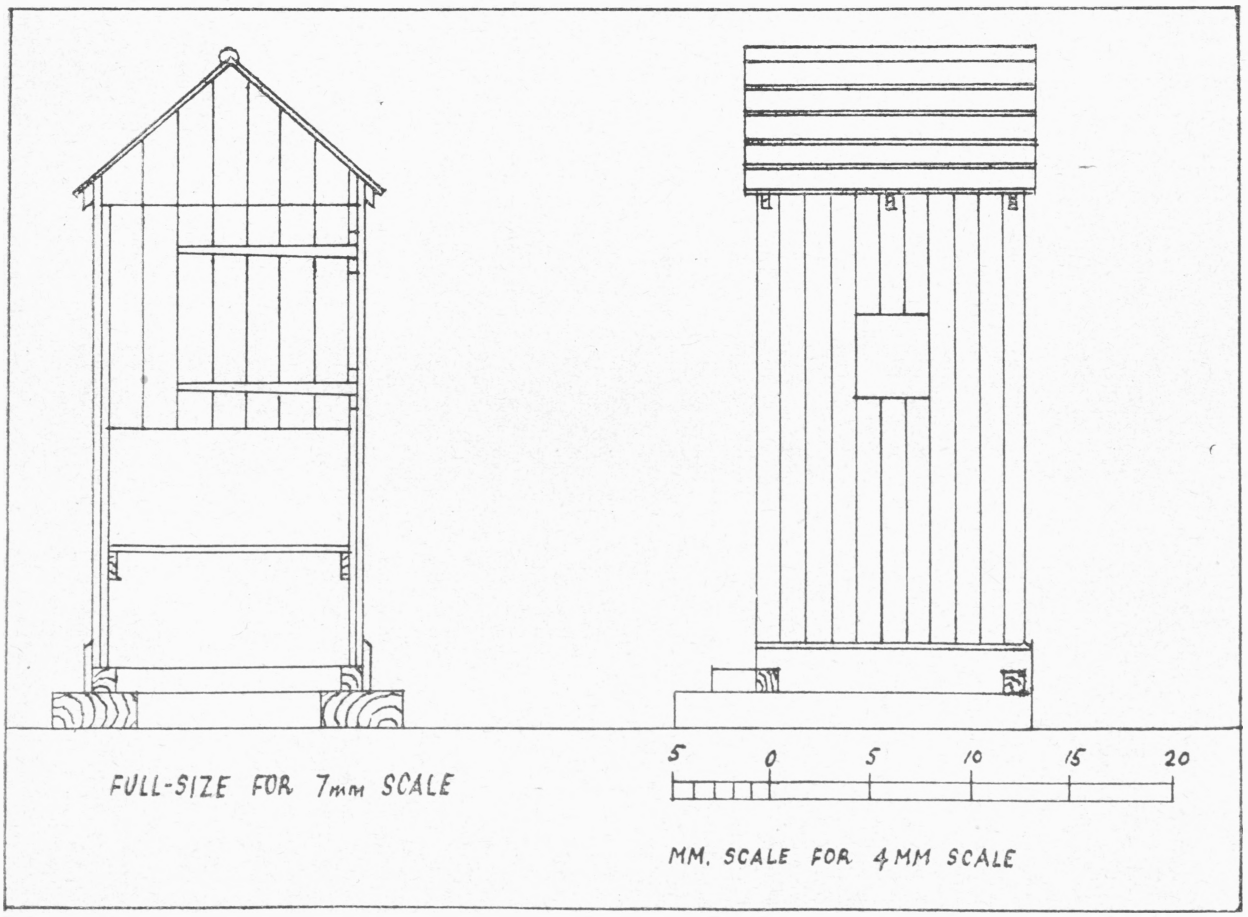


A LINESIDE TELEPHONE CABIN

Following his 7 mm. platelayer's hut that appeared in the February issue, Maurice Kelly provides drawings and a photograph of another interesting lineside feature.



BUILT of creosoted planks on a simple frame and mounted on a foundation of old sleepers, this lineside telephone cabin can be an attractive addition to your layout. The construction is straightforward, there being nothing about the cabin that is not utilitarian. Protection is given the user by a half-door swung on two 42-in. T hinges, and for his comfort, a simple bench is provided. The gabled roof of clinker planking is erected on three roof timbers.



WITH THE CLUBS

Leicester Model Railway Group

The next meeting will be held in the hall of the Church of the Martyrs, Westcotes Drive, Leicester, at 7.30 p.m. on Tuesday, May 15th, 1956, when Mr. A. F. Stedman will give a talk on "Some Points about Production Models."

Hon. Secretary: B. F. CLAYTON, 13, Bramcote Road, Wigston Fields, Leicester.

Historical Model Railway Society

We must apologise for having reported in our April issue the subject of Mr. George Dow's lecture at the Historical Model Railway Society's Manchester meeting in February as the G.E.R. It should have been Great Central Railway.

Mr. H. F. Hilton will give a talk entitled "75 Years of Railways" on May 7th, at 7 p.m. at the headquarters of the Stephenson Locomotive Society, 32, Russell Road, W.14.

Hon. Secretary: F. C. OLLEY, 11, High Street, Kimpton, Hitchin, Herts.

Norwood Model Railway Club

This club is holding its annual exhibition at St. Luke's Hall, West Norwood, S.E.27, on Saturday, May 5th. The exhibition will be opened at 12 noon and will remain open until 9 p.m. In addition to the layouts and exhibits of members of the club, there will be exhibits from several other clubs. Members of the Norwood club extend a cordial invitation to all other club members and anyone interested in the hobby to visit the function.

The secretary and treasurer, L. Bramma Smith, will be pleased to send details of the club and its activities to anyone interested if they would contact him at the club's headquarters in the Crypt of St. Luke's Church, West Norwood, S.E.27, or write to him at 9, Chestnut Road, S.E.27.

North Middlesex Model Railway Club

Our headquarters at Lacey Hall, Hazelwood Lane, Palmer Green, N.13, will once again be the rendezvous for model railway enthusiasts on Saturday, May 12th. From 3 p.m. to 8 p.m. we are holding our Fifth Annual Exhibition.

The club's scale "OO" gauge layout will be on show, plus two or three members' own portable layouts. There is also a competition for models, with medals for the winners of each section, open to members only.

Particulars of membership may be had from R. A. MILLS, 37, Compton Road, London, N.21.

Salisbury and District Model Engineer Society

Variety will be the keynote of the society's sixth exhibition which is to be held at the Market House, Salisbury, on Saturday 19th and Whit Monday, May 21st, and will be open from 10 a.m. to 9 p.m. each day.

The local Short Wave Radio Club will have a large stand with several working transmitters and other pieces of equipment, and they will no doubt be making contact with other "hams" throughout the exhibition.

An extensive "O" gauge steam railway featuring among other items an S.R. "Pacific" locomotive and fine-scale rolling stock will be operated by two members, G. D. and R. Lovell, and there will also be an "OO" gauge layout.

Among other attractions there will be model flying demonstrations; demonstrations by the Wiltshire Fund for the Blind; working models; and a model fair, and it is hoped that an "M.E." engraving machine will be ready in time. The Mullard "disappearing ball" and Meccano Ltd. will be among the trade stands.

Entries are invited from all model makers in the district.

Hon. Secretary: R. A. READ, 90, Woodside Road, Salisbury.

West Wickham Model Railway Club

The club has now acquired a permanent clubroom at the Hard Courts Club, The Grove, West Wickham. Meetings are being held on Monday evenings, and visitors will be welcome.

The annual exhibition will be held on Saturday, May 26th, at the Emmanuel Church Hall, The Grove (off High Street), West Wickham. Doors open at 11 a.m. Eleven working layouts have been promised, and there will be displays of models of the Croydon, Northolt, Norwood and Orpington clubs, as well as British Railways and the Talyllyn Railway Preservation Society.

Enquiries should be addressed to the Hon. Secretary: H. H. POWELL, 27, Glebe Way, West Wickham, Kent.

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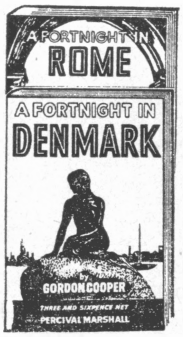

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Staffordshire Model Shop since 1936. Model railwaymen always welcome. New "OO" layout.—J. W. BAGNALL, South Walls Road, Stafford. Tel.: 420. M.E.T.A.

Handyman's Shop, 27, Blakey Moor, Blackburn. Stockists of Wrenn, Tri-ang, Walkers & Holtzapffel, Gem, Nucro, Peco accessories. (M.E.T.A. dealer.)

"OO" 10½ Gauge. All types of models bought, sold and part exchanged. Lists/stamp.—MODELS (CITY) Ltd., 2, The Arcade, E.C.2. Avenue 2759.

American Publications. "Model Railroad Track & Layout," 15s. 9d., "Steam Locomotives," 8s.; "Build your own Model Cars and Locos," 8s.; Frank Ellison on Model Railroads, 15s. 9d. Year's subscription "Model Railroader," 39s. Back numbers, 3s. 6d. (after June, 1952, 4s. 6d.). Catalogue free.—WILLEN LTD. (Dept. 42), 9, Drapers' Gardens, London, E.C.2.

Birmingham—Bearwood Models for scale railway equipment and Dublo; buy, sell and exchange "OO" and "O" gauge; specialists in superb trackwork 16.5 and E.M.—8, Three Shires Oak Road, Smethwick, 41; and 53, Parade, Birmingham, 1.

Catalogue, No. 12, containing over 400 items of electrical, mechanical and radio equipment for experiments, etc., price 1s. 6d. post free.—ARTHUR SALLIS, 93, North Road, Brighton, Sussex.

Craddocks (Romford) Ltd., M.E.T.A. dealer. We stock the products of all the leading manufactures of scale components, as well as full stocks of the proprietary systems. Our mail order and credit sale terms assure you of service and satisfaction. Call, write, or phone, Romford 553.—82, South Street, Romford, Essex.

Model Railway Constructor, vol. 1 to vol. 21, bound: vol. 22 unbound, £7: Model Railway News 1946 to 1955 unbound 50s. Exchanges for "OO" scale considered.—CORBETT, 3, Uplands Avenue, Willenhall, Staffs.

Sale or Exchange for Steam two B/L compounds £5 10s. Shenphone variable power unit, twin outposts, £9; controllers 27s. 6d.; electric "scissors" £5, double junctions 75s., turnouts 30s. New brass rail 11d. yd., steel 7d.—MILBURN, 29, Buxton Road, E.4.

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Marklin Stud Contact track and points, locos and rolling stock. Equal new.—Box No. 8028, MODEL RAILWAY NEWS Offices.

Lionel American Set. Two Engines large quantity of lines, signals, trucks, coaches, etc., many extras, £100 worth, bargain £32 10s.—16, Claremont Road, Handsworth, Birmingham, 19. Phone: Nor 6174 after 6.30.

Large Quantity 16.5 mm. Gauge 2 and 3 rail kits, parts and accessories, cheap. S.A.E. for list.—104, Hambledon Road, Middlesbrough.

Yeovil. Railway Modellers invited to call. Tri-ang service agents. Peco, Trix, Rivarossi. Mail orders.—HINKS FOR RADIO, 36, Middle Street, Yeovil.

Wrenn Universal 2-Rail Track, 2s. yard, points 5s., crossovers 10s., almost new. Springpark 3126.

For Sale. Gauge "OO" Exley sub-standard coaches, discontinued catalogue items, oddments at reduced prices Foolscap s.a.e.—Below.

For Sale. Gauge "O" Locomotives, coaches, rolling stock, track by Exley, Beeson, Mills, Hornby, with discontinued lines, sub-standard Exley coaches, oddments. Foolscap s.a.e.—Below.

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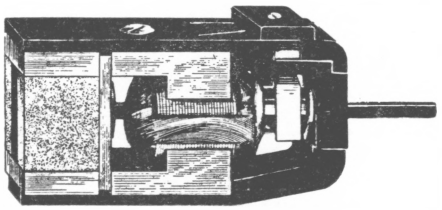

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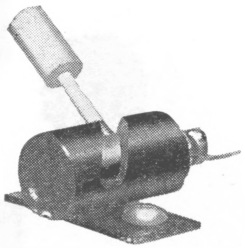

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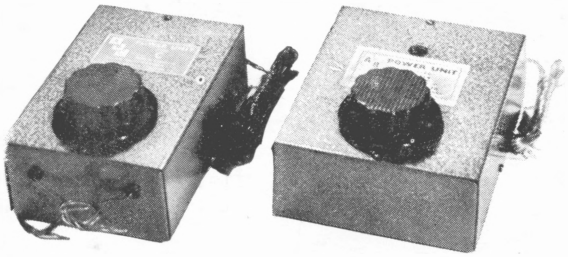

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